DOCUMENT RESUME

ED 067 390 SP 005 886

AUTHOR	Elfenbein, Iris M.
TITLE	Performance-Based Teacher Education Programs: A Comparative Description.
INSTITUTION	American Association of Colleges for Teacher Education, Washington, D.C.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
REPORT NO	PBTE-8
PUB DATE	Oct 72
NOTE	121p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	*Educational Programs; *Performance Based Teacher Education; *Program Content; *Program Evaluation; *Teacher Education

ABSTRACT

This monograph presents a general view of the results of implementation of performance-based teacher education programs (PBTE). Part I includes an overview of PBTE and a brief description of PBTE-oriented institutions selected by the PBTE committee. The overview concerns introductory information, the basic approach to implementation and an analytic framework. The description of institutions covers both observation and recommendations. Part II presents a detailed description of specific PBTE programs emphasizing conceptualization, selection, support, control, organization, linkage, instruction, management, and cybernation. An extensive bibliography and a glossary are included. The appendixes include a factual description of PBTE programs in tabular form. (MJM)

ED 067390

PERFORMANCE-BASED TEACHER EDUCATION PROGRAMS
A Comparative Description

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October 1972

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SP005 886

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Library of Congress Catalog Card Number: 72-91035

Standard Book Number: 910052-68-9

Preface

The American Association of Colleges for Teacher Education is pleased to publish this paper as one of a series sponsored by its Committee on Performance-Based Teacher Education. The series is designed to expand the knowledge base about issues, problems, and prospects regarding performance-based teacher education as identified in the first publication of the series on the state of the art.[1]

Whereas the latter is a declaration for which the Committee accepts full responsibility, publication of this paper (and the others in the PBTE Series) does not imply Association or Committee endorsement of the views expressed. It is believed, however, that the experience and expertise of these individual authors, as reflected in their writings, are such that their ideas are fruitful additions to the continuing dialogue concerning performance-based teacher education.

In this paper, the author describes and analyzes seventeen performance-based teacher education programs from thirteen institutions of higher education. The description and analysis is presented under nine organizational characteristics and, in addition, the paper contains pertinent factual data about the respective programs. We believe that this study is an important contribution to the literature about PBTE.

AACTE acknowledges with appreciation the role of the National Center for Improvement of Educational Systems (NCIES) of the U. S. Office of Education in the PBTE project. Its financial support as well as its professional stimulation are major contributions to the Committee's work. The Association acknowledges also the contribution of members of the Committee who served as readers of this paper and of members of the Project staff who assisted in its publication. Special recognition is due J. W. Maucker, chairman of the Committee, and David R. Krathwohl, member of the Committee, for their contributions to the development of the PBTE Series of papers.

Edward C. Pomeroy,
Executive Director, AACTE

Karl Massanari, Associate Director,
AACTE, and Director of AACTE's
Performance-Based Teacher Education
Project

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[1]Elam, Stanley, "Performance-Based Teacher Education: What Is the State of the Art?" The American Association of Colleges for Teacher Education, December 1971.

Introductory Note

When the Performance-Based Teacher Education Committee first began its work in 1970, performance-based programs had more reality in conception than in fact. Only a handful of institutions in the country had begun implementation. In order to find out what PBTE looked like when translated into action, the Committee visited these pioneers. As the visits were made, other programs came to their attention, and were in turn visited when their stage of development warranted.

The Committee, after assembling its information in a form similar to Tables 1-5 of this monograph, was able to see the 1970-71 level of the state of the art, the variety of forms in which PBTE was formulated, and some of the problems, peculiarities, and advantages of PBTE. However, more needed to be done. As a result, Miss Elfenbein, under the supervision of Committee member Margaret Lindsey, Teachers College, Columbia University, was commissioned to gather more data, more comparions, and draw generalizations for the Committee. This monograph, part of her doctoral dissertation, is the end result.

The institutions selected were by no means a random selection of PBTE oriented institutions. The Committee, on the basis of the information available, believed that they represented a good cross section of institutions working in the field at the time. But a year has passed and some of the programs are much improved while others, we know of at least one, may have already abandoned the effort. Nonetheless, the study remains important because it indicates what eventuates when a college undertakes a PBTE program.

A number of interesting observations emerged from the study, such as: the use of experimental and pilot PBTE programs to bypass vested interests, the kind of effort that seems most effective in bringing a faculty along in support of the idea, the tremendous developmental effort above and beyond normal work loads that has typically been expanded to convert a program, the necessary retraining to provide the faculty with skills necessary for constructing modules, working with small groups and tutoring, the necessary reorientation of students to their new role, the effect on faculty promotions criteria, the rudimentary state of evaluation and management systems. These and other insights that the careful reader may gleam from this analysis make it useful to those currently planning PBTE programs. They reinforce the universal impression that there is an element of unescapable reality that tempers the plans of all innovators, and PBTE is no exception.

So far the Committee's publication series has explored PBTE in terms of understanding and critiquing the general concept (#1 Elam, #4 Broudy, #7 Bibliography), in terms of its future implications (#3 Andrews, #5 Cooper and Weber), and in terms of the results of implementing PBTE.

This monograph, which is one of those in the last category, gives a general view of the results of implementation. For more in depth views, the reader may also wish to study the two case studies that have been published--Caseel Burke's description of the Weber State Program (#2) and Fred Giles and Clifford Foster's account of the University of Washington Program (#6).

Other papers are in preparation on the more immediate implications of PBTE and on some of the specific problems of implementation and further explication of the general concept.

David R. Krathwohl, Member of the PBTE Committee and chairman of its Task Force on Commissioning Papers

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Part I

AN OVERVIEW

Introduction

During the past decade public attention has increasingly focused on the schools and their difficulties in providing adequate education for all segments of the nation's population. The responsibility to fulfill this mandate ultimately falls upon the teachers. It is they who are expected to help develop an adequate foundation for learning which will be of use to pupils throughout their lives. "The condition of teaching requires each teacher to make decisions and translate the decisions into actions (performance). Accountability for performance (both teacher and learner) will be based on the quality of decisions as well as actions."[1]

In an attempt to improve education and assist teachers to meet society's rapidly changing needs, educators are engaged in a continual search for alternative means to improve teacher competence. The concept of performance-based teacher education (PBTE) emerged in the latter part of the Sixties as one alternative way to prepare teachers.

Many states have begun to explore the possibility of certification of teachers based on performance as well as on education and knowledge. Generally, certification of teachers is granted upon the completion of a state-approved teacher education program or upon the completion of certain courses worth a particular number of credits as indicated by a college transcript. This procedure is assumed by some persons to "...guarantee that teachers and administrators are properly prepared..."[2] but it does not specify explicitly what competencies have been mastered. It is believed that performance objectives can provide minimal specifications for the development of teacher competence. Referred to as performance-based certification, this approach it is hoped, can be combined with

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[1]Texas Performance-Based TTT Project, *A Proposal for Educational Personnel Development Operational Grant*, Part D, EPDA Act of 1965, (Austin: State Education Agency) p. F1.

[2]Lucien B. Kinney, *Certification in Education* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1964) p. 4.

performance-based teacher education programs to aid in bridging the gap between theory and practice and to provide more competent teachers.

Other sources, too, provided impetus to the movement. The United States Office of Education (USOE) encouraged the PBTE movement through funding. Funds were provided for the development of ten model Elementary Teacher Education Programs based on some form of performance criteria and means for testing their feasibility. The USOE continues to support Teacher Corps programs which require performance-based training programs. The American Association of Colleges for Teacher Education (AACTE) developed standards that require a faculty to define the professional roles of the teachers and design preparatory programs based on those roles. It is implied that performance objectives will be derived from these roles. Judgments about the quality of the programs, the *Standards* indicate, should be in terms of these objectives. "The ultimate criterion for judging a teacher education program is whether it produces competent graduates who enter the profession and *perform effectively*."[1]

Performance-based teacher education programs have emerged as one facet of the PBTE movement. The AACTE, through its Committee on Performance-Based Teacher Education, has, for almost two years, examined the PBTE movement and its various aspects. The Committee has commissioned papers intended to disseminate information about them.

In 1970 the AACTE surveyed its institutional membership to determine what colleges were operating performance-based teacher education programs. It was clear from the responses that there was uncertainty about PBTE, that there were few teacher education programs which identified themselves as being performance-based, and that there was a widespread desire for information about such programs.

The Committee deemed it necessary to support an exploratory study which would gather empirical data about these incipient programs. To meet this need, this study was undertaken. Its purpose is to provide for the teacher education public a description of the state of the art of performance-based teacher education programs

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[1]AACTE, Recommended Standards for Teacher Education: *The Accreditation of Basic and Advanced Preparation Programs for Professional School Personnel* (Washington, D.C.: American Association of Colleges for Teacher Education, 1970) p. 12. (italics added)

operational during the 1970-71 academic year. Inasmuch as in-depth studies of specific programs have been commissioned as part of this series, this paper attempts to present an extensive picture of the programs rather than an intensive description of each program.

Approach

Seventeen programs from thirteen institutions of higher education were selected for examination.[1] These public and private institutions of varying sizes and resources are located throughout the United States. Preliminary observational visits were made by teams representing the PBTE Committee to colleges and school districts identified as having PBTE programs by members of AACTE and representatives of the USOE. The criteria used to determine the programs for inclusion in the report were that they were operational before August 1, 1971; that they had been visited by representatives of the Committee prior to October 15, 1971; and that they were preservice programs operated by a degree-granting institution, upon whose completion certification as a teacher would be forthcoming. The information presented, related to the operation of these programs, deals with the academic year 1970-71.

The terminology is a focus of disagreement: some educators refer to programs as "performance-based," others call them "competency-based." Since the purpose of the study is to look at programs and not to raise issues beyond the scope of this analysis, the adjective "performance-based" will be used to refer to all programs.[2]

The definition selected to identify such programs is that of Cooper and Weber:

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[1] The Appendix includes a list of the programs, their directors, and their institutional affiliations, as well as six tables which give a factual overview of the programs during the academic year 1970-71. Note that SUCB and U of Wash each host two programs.

[2] A thorough analysis of the distinction between the two terms lends itself to a study of its own. Stanley Elam in *Performance-Based Teacher Education; What is the State of the Art?* indicates that the AACTE Committee on Performance-Based Teacher Education has decided to use the adjective, "performance-based."

> A competency-based (or performance-based) teacher education program is a program in which the competencies to be acquired by the student and the criteria to be applied in assessing the competency of the student are made explicit and the student is held accountable for meeting those criteria...
> .....
> Three types of criteria are used: 1) knowledge criteria which are used to assess the cognitive understandings...; 2) performance criteria which are used to assess the teaching behaviors...; and 3) product criteria which are used to assess the student's ability to teach by examining the achievement of pupils..."[1]

The basic sources of information used in this study were documents and on-site visits. The documents, published and unpublished, dealt with the theoretical and philosophical rationale of the PBTE movement and included reports, letters, and memoranda describing personal visits and experiences. The program materials, included orientation brochures, bulletins, instructional materials, and resource materials.

The on-site visits were made to programs by teams of members and/or representatives of the Committee. During visits observers met with participants in the programs -- college personnel: faculty, staff, administrators, and students; and school personnel: district administrators, superintendents, principals, coordinators, and teachers. Where appropriate, field center directors and/or team leaders also were interviewed. Further information, when necessary, was obtained by telephone interviews with program directors.

Analytic Framework

The programs take a systems view[2] of program design which includes determining program goals, formulating performance objectives, analyzing functions and components (defining the parts of

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[1] James M. Cooper and Wilford A. Weber, "Chapter I, Vol. II, A Competency-Based Systems Approach to Teacher Education." (Typewritten)

[2] Bela, Banathy. *Instructional Systems* (Palo Alto, California: Fearon Publishers, 1968), p. 91. "A way of thinking, by looking at man-made entities as systems, as assemblages of parts which are designed and built into an organized whole for the accomplishment of a specific purpose..."

the subsystems), distributing functions among components, scheduling, training and testing of the systems, installation, and quality control. The value of the systems approach is its cybernetic quality -- its ability to adjust, based on feedback.

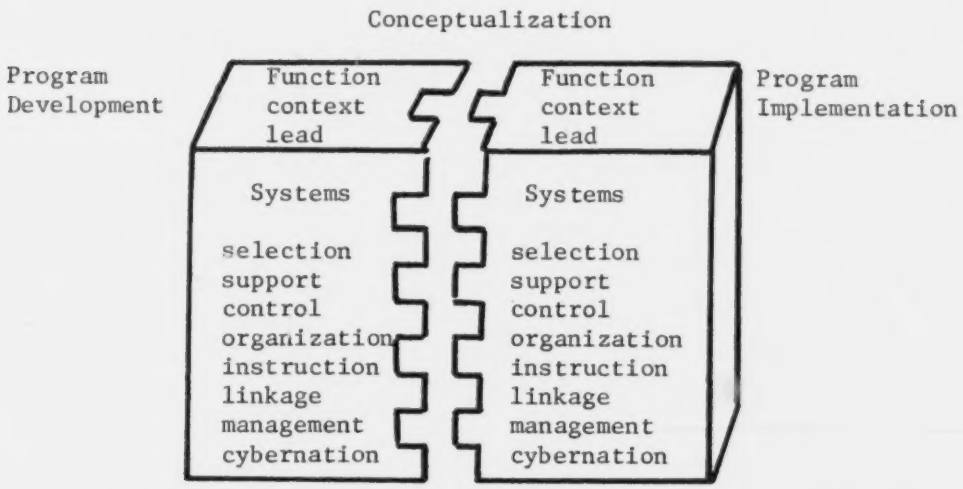
Implicit in systems procedures is the emphasis on process rather than structure. Preparation and continuing education of teachers is a process relating directly to the institutions of higher education, school districts, and other organizations with which they interact. Intergroup channels of communication are necessary. Various questions, such as sharing resources and information, and defining responsibilities, need to be clarified as the process of teacher education occurs. An implication of this design requirement is the evolution of a framework of responsibility in which all specified organizations will contribute to the goal of producing well-qualified, competent teachers.

The purpose of the programs is to produce teachers who can promote cognitive, affective, and psychomotor growth in pupils. This suggests a conceptualization of the teacher in which all his or her various roles are identified; the context in which he or she will function is envisioned, as is the time frame in which the teacher will perform.

To illustrate the interrelationship of the elements common to the programs covered in this study, the writer has found it helpful to visualize the PBTE programs as suprasystems consisting of two interlocking blocks -- the development block and the implementation block. Each has as one dimension, the conceptualization, the specific purposes or goals for which the system was designed; a second dimension, systems, consists of the interdependent parts which combine with the third dimension, process. Interlocked they form an organized, cohesive whole.

The goals of these programs are generally in terms of the conceptualization of the teacher in interaction with his or her environment. Conceptualization is based on three dimensions: 1) the function, which includes the behaviors expected, permitted, and prohibited; 2) the context in which this functionary role occurs; and 3) the lead, which is the gap between what exists today and the context for which teachers are being prepared. Is the conception based on today's environment, the near future, the distant future? To recapitulate then, the conceptualization of the teacher is based on three notions: the function of the teacher in the context of the institution envisioned during a specific time, the lead.

Figure 1. FRAMEWORK FOR PBTE PROGRAMS



The programs specify behavioral objectives as a basis for the selection of appropriate knowledge and experiences. These are derived from the model of the teacher's anticipated role in the school. Analyses of the teacher's tasks are made forming a basis for the selection of the content and methods necessary in practicing its application. The use of behavioral objectives which identify expected teacher performance establishes a direct relationship between the teacher education program and the teacher's classroom performance.

To accomplish the goals of the programs and achieve output performances previously determined desirable, a series of interdependent parts, systems, have been identified which must operate interdependently to accomplish the purpose of the suprasystem, the PBTE program. These systems, identified in Figure 1, are:

The *selection* system: the system which provides the process by which the participants in the programs -- organizations and individuals -- become involved.

The *support* system: the system which provides the elements desirable for, and supportive of, the development and implementation of the innovative programs. Subelements of this system are psychological, financial, technical, and physical plant support.

The *control* system: the system which provides the decision-making component. Membership includes organizations and individuals

listed in the selection system. Here are defined the roles of each and the areas of control.

The *organization* system: the system which provides the organization component within three dimensions: 1) the organization of programs, 2) the organization of personnel, and 3) the organization of time.

The *instruction* system: the system which provides 1) the content which is included in the program, 2) the strategies of instruction, and 3) the staff which is necessary for the instructional system.

The *linkage* system: the system which provides for the interaction which must occur among the organizations and individuals involved in PBTE programs and their environment.

The *management* system: the system which provides for the operation and monitoring of the program, students, and faculty.

The *cybernation* system: the system which provides for feedback about the program, the product, the instructional materials, and the staff. The feedback includes both formative and summative evaluation and assessment.

PBTE PROGRAMS

Performance-based teacher education programs are incipient phenomena exhibiting characteristics often associated with youth: experimentation, enthusiasm, commitment, zeal, and uncertainty of results. The programs studied occupy a range in terms of the affiliation and size, the rationale, the developmental and implemental procedures, the supports for the programs, and the position on a theoretical-practical continuum.

Because this is a first step in the exploration of performance-based programs, it is not possible to present more than observations. The sources from which they originate are indicated by the name of the system in the parentheses following the statements. Generalizations and theory development need to be done based on a more extensive sample of programs which are better developed and more intensively examined.

A Brief Description of the Institutions, 1970-71

1. *Livingston University (LU), Livingston, Alabama*

A state-supported university located in rural Alabama with a total student enrollment of 1,600, it is the only institution of higher education in the area. The entire elementary and secondary teacher preparatory programs were performance-based. The program was planned for three years and operationalized in the summer of 1970. As of September 1971 the management system was computerized and the program extended over four years of undergraduate study.

2. *Florida Agricultural and Mechanical University (FAMU), Tallahassee, Florida*

A state-supported university with a total student enrollment of 4,500. The PBTE program was a very small pilot program for the preparation of secondary school teachers operating under special approval from the state. The program was planned during the year prior to its operation in the fall of 1970. The program encompassed the professional component and included field experiences in Tallahassee. Students were required to enroll for six quarters.

3. *University of Georgia (U of Ga), Athens, Georgia*

A state-supported university with a total student enrollment of 19,000. The College of Education is committed to a total performance-based program in elementary education although it was only about 35% performance-based at the time of the study. The program, originally developed as a Model Elementary Teacher Education Program funded by USOE, became operational in the fall of 1970. Attempts were made to provide varied field experiences in rural and suburban schools with integrated populations.

4. *College of Saint Scholastica (CSS), Duluth, Minnesota*

A small, private college with a total enrollment of 925 students. The teacher training program has been totally performance-based for all levels since fall 1967. The program provided field experiences in private and public schools and prepared students for teaching positions in individualized programs.

5. *Southwest Minnesota State College (SMSC), Marshall, Minnesota*

A new college opened in 1967 with an enrollment of 3,200 students, it is the only institution of higher education in this rural area of southwest Minnesota. The Division of Education offered PBTE

programs only. Five field centers in neighboring school districts served as training sites; the directors of these were joint appointees of the College and the school districts.

6. *State University College at Buffalo (SUCB), Buffalo, New York*

This state-supported college with a total undergraduate enrollment of 8,000 operated two preservice performance-based programs -- one on the graduate level (Teacher Corps) and one on the undergraduate level (UUTEP). Both, committed to preparing teachers for urban settings, were parallel programs which students elected to enter. Both became operational in 1970. UUTEP students were field-situated for three semesters.

7. *Teachers College, Columbia University (TCCU), New York, New York*

A private graduate school. The performance-based program was the only preservice elementary education program in the college and enrolled thirty-two preservice students, plus others from Special Education. The program was a modification of the Model Elementary Teacher Education Program funded by the USOE. Students in the program attended full-time and completed the program in three semesters. During the summer semester the students developed and operated a school program for an integrated urban population.

8. *University of Texas (UTEP), El Paso, Texas*

The state-supported university enrolled 12,500 students. The PBTE program, begun in the summer of 1971, was the newest program investigated. The graduate, preservice Teacher Corps field tested the program which will be used as a parallel undergraduate program in 1972. The program takes two years to complete and was designed to train teachers to work with urban Mexican-American children. All participants were bilingual.

9. *Brigham Young University (BYU), Provo, Utah*

With an enrollment of 26,000, this private university located in a suburban community offered a performance-based secondary education program as a parallel program. The program was implemented in 1968, after a four-semester pilot period. Students enrolled for at least one year during or after the junior year and were required to be full-time program participants for at least one semester.

10. *University of Utah (UU), Salt Lake City, Utah*

This state-supported university with an enrollment of 23,000, ten

percent of whom were enrolled in the School of Education, operated a very small pilot program in elementary and secondary education for seniors who committed two quarters of the senior year to the program. Instruction took place in public schools to which the students were assigned. The program operated through a special certification arrangement with the state. It began in the fall of 1969.

11. *Weber State College (WSC), Ogden, Utah*

All teacher education was performance-based at the College. Of the 8,500 enrolled, 600 students were preparing to be teachers. The program began in fall 1970 after a preliminary planning period which allowed most of the regular education faculty released time to develop program and materials. Students entered the program during the junior year. A case study published by the AACTE, as the second of a series of PBTE studies, describes the program in detail.

12. *Western Washington State College (WWSC), Bellingham, Washington*

The program was a parallel one, accommodating approximately thirty-six students each quarter for two quarters. Students entered the program during or after the sophomore year, and worked on-site in urban Seattle. Inservice training, much of which was given during the school day, was required of all teachers participating in the program. The public schools and the college shared resources and equipment. This was the only program which unequivocally indicated that the operation of the program was less costly than traditional programs.

13. *University of Washington (U of Wash), Seattle, Washington*

This state-supported university was committed to a multiplicity of teacher preparation programs, two of which are included in this study. Both programs, STEP and Renton, included elementary and secondary teacher preparation. As in WWSC, teachers were required to participate in inservice training to be part of the program. Materials and equipment were shared by the school districts and the college. As part of the PBTE series, the AACTE will publish a study describing the evolution of the parallel teacher education programs in the University of Washington.

Some Observations

The *rationales of the programs* indicated a desire to train teachers competent to work with minority groups. Many programs

envisioned schools with ungraded classes and individualized instruction. In contrast to traditional teacher education programs which are accused of responding to the immediate needs of the situation without adequate conceptualization and rationale, PBTE programs have a *purpose which is identified and public.* This gives a semblance of cohesion to the entire professional component. In some programs, however, this was little more than the logic and sensibleness of PBTE. (Conceptualization)

Basic to effective communication of purpose and objectives is the *clarity of conceptualization* of the program and its product, the teacher. Clarity and integration were not always apparent in the conceptualization of the teacher, although they were more frequent in the conceptualization of the context -- the school setting. (Conceptualization, Organization)

There was a willingness in many segments of the education community *to consider PBTE* because of existing dissatisfaction with the acknowledged discrepancy between theory and practice. In answer to public demands for better teachers; to changes in materials, technology, and the social system; to an increased rate of knowledge production; and in the absence of any valid scientific findings, many find this approach to teacher education innovative, exciting, and worth trying. (Conceptualization)

Initiators of PBTE programs (with one exception) were internal agents, faculty members who had a direct, preexisting relationship with powerful college administrators and who also had secure tenure. (Selection)

External agents -- personnel from the USOE and various state education departments -- have *influenced the initiation of PBTE programs* through financial support given to programs and program components whose stated goal was an exploration and development of performance-based teacher education. Additional support in the form of consultants, materials, and special certification allowances was provided as a result of endorsement by the external agents. Simultaneously, federal, state, and local governmental bodies increased support of education, particularly for ethnic and economic-minority education. This was apparent in Teacher Corps programs which were performance-based. In all but two programs there was some indication of support from government authorities, either in funding or in the provision of technical assistance in the form of consultants, materials, and also physical plant facilities. (Support)

PBTE could be *adopted on a partial and flexible basis* it was shown. Initiators who were unable to initiate total program change

immediately, made modifications in limited ways. For example, identification of performance objectives in a course led to development of modules to achieve the objectives. The next step was to modularize that particular course, thus eliminating the need for institutional approval which a total program change would require. (Support, Organization)

Frequently, *programs developed as temporary systems*, either experimental or pilot. This provided initial protection by allowing the programs to bypass vested interests and to develop through trial and error. It permitted temporary freedom from the norms of the traditional system. Ultimately, the programs must prove themselves feasible and able to meet realistic demands. (Support, Organization)

One of the purposes of the programs was to provide a strong, *effective model* for the preservice teacher. Attempts were made to eliminate the self-contained classroom and provide models for individualized instruction and self-actualization based on student needs. Programs were personalized by planning programs suitable to the interests and needs of each student. Instead of class meetings, students scheduled themselves for seminars, small group meetings, and individual advisement, counseling, and/or tutoring, as these needs were identified. Close relationships between faculty and students developed through the frequent intensive contacts.

Those total programs with well-informed faculty, fully familiar with the objectives and the operation of the programs, did present models. In other instances, students commented that faculty and/or field personnel seemed unsure of their instructional roles and that instruction was incongruent with program goals as the student understood them. (Conceptualization, Instruction)

PBTE programs assumed *increased responsibility for their product*, the preservice teacher, through attempts to publicly identify purposes of programs and the desired performances of the trainees based on the analysis of the role of the teacher and his function. (Conceptualization)

Systems theory offered new opportunities for program planning and operation including feedback leading to flexibility and change in the pattern of control and self-regulation. All the programs utilized the systems approach. All identified program goals, behavioral objectives, and structured programs in terms of input, process, and output. The programs as well as their components, were structured in this fashion, thus identifying the competencies and expectations of the programs to some degree. (Conceptualization)

New perceptions regarding roles and responsibilities were gained during the program development stage. Positions such as field center directors, clinical professors, and field associates were conceived of and created, requiring joint appointments and mult-institutional accountability.

Specialists were of critical importance to these programs. People with different skills were required at different stages. For example, during the planning and development stage, there was an emphasis on the need for program development specialists -- people who could develop materials who were expert writers, media experts as well. At the point of implementation those with expertise in teaching and counseling were of primary importance, and development specialists took a secondary role. The concept of *differentiated staffing* emerged. (Organization, Control)

The programs provided additional field experiences which led to *new assignments for school personnel*. In schools, the teacher's traditional role changed from that of a bureaucratic functionary with little power to initiate to that of a master teacher who needed as well the skills of a teacher trainer and supervisor. Without appropriate orientation, training, and on-going inservice work, public school personnel were unsure of their roles in these programs and were not always able to provide the supervision and training for the student which was essential to the facilitation and excellence of teacher training in PBTE programs. (Control, Linkage, Selection, Instruction)

Staff training and skill renewal proved to be necessary. Development of additional professional skills ought to be required for all staff involved in PBTE programs. Research skills and interpersonal skills were necessary. Knowledge about new areas such as systems design, task analysis, identification and use of behavioral objectives, were essential, as was familiarity with media and their use. Staff retraining should commence in the developmental stage. Because of shortage of time and money, there was insufficient attention to the preparation of personnel for change. (Organization, Instruction, Linkage)

Much *energy and time* were committed to facilitate the adoption, planning, and implementation of these programs by personnel who were usually voluntary participants. Because of the new roles and responsibilities, increased time demands were placed on college faculty. In the developmental period, the time necessary for development of instructional materials and procedures was considerable, while during the implementation phase, the time required for contact with students and field personnel often increased. This could be offset by the use of a differentiated staff. The danger

appeared, however, that without increased support for personnel and funds for system development, innovators would lose their commitment and enthusiasm at the expense of the program. (Instruction, Organization)

PBTE indicated a possible need for *change in criteria used for college faculty promotion*. How would faculty who engaged in time-consuming supervisory, counseling, and facilitative activities, as well as program and material development, find time for the other tasks expected of higher education personnel? How would they find sufficient time to write, research, and publish? How would they gain the visibility that many identify as necessary for upward movement in colleges and universities? This factor may inhibit active participation of some interested and qualified personnel. (Instruction)

The *cost of operating PBTE programs* was not as expensive as developing them, although it tended to be more costly than traditional programs, at least initially. Faculty time was expensive and programs made large demands for such time in the developmental stage and lesser demands when the programs became operational. It is assumed that as the programs continue the costs will be reduced because much of the necessary hardware and materials will have been acquired.

Funds to pay for additional manpower to perform essential chores would be desirable; additional consultants and experts would be most welcome. Funds could be used to purchase released time for involved faculty, to provide additional personnel and consultants, and materials and media. (Support, particularly Foundation support, Selection, Organization, Management)

Program development was complicated. The programs were designed to facilitate the development and evaluation of specific achievements. In order to do so, there was provision for each student for individualization, alternate learning routes, self-pacing, modularization and use of media. Time for total program planning of all systems was necessary. (Organization, Instruction)

Dissemination and communication, through which understanding of purposes and objectives of PBTE programs were developed, aided in countering rejection and gaining acceptance. Intergroup and intersystem communication concerning the existence and efficacy of PBTE programs was mandatory for success. Communication channels in and out of the innovative group helped establish interest and support for the new program. This was accomplished by training all participants and providing voluntary workshops for all those interested. Consultants visiting campuses aided in the dissemination

by sharing their expertise with members of the innovative PBTE group and other members of the institution's staff. (Support, Linkage, Instruction)

Orientation of all personnel involved in the program was essential. *Faculty and public school personnel* needed to understand the rationale and objectives of the program; they needed to be familiar with the curriculum and strategies of operation; and they needed to be aware of the essence of the role each played and the responsibilities each had. Interinstitutional conflict arose because of confusion concerning responsibilities and roles. In some programs formal orientation procedures were apparent -- their required use would be desirable in all programs.

Student orientation was a key requirement. It was observed that students were often initially resistant and unable to operate efficiently because of a lack of understanding of the program and its requirements. This was particularly true in colleges where PBTE was the only teacher training program. Sufficient time and support should be given to students during the initial period to assist them in orientation to the unfamiliar responsibilities, self-actualization, and decision-making required of students in PBTE programs. (Organization, Linkage, Instruction)

Initiators of PBTE advocated *partnership or consortia* among the various teacher education communities -- schools, colleges, professional organizations, professional agencies -- in development and implementation. However, it was less common in reality than in theory. Some directors identified this as a major problem.[1] Working collaboratively and sharing power was not simple, and institutions did not willingly and easily give up their traditional powers and roles. Equalizing and offsetting time with schools so that each institution provided equal services, time, and personnel was a problem. Collaboration between university and public schools was uncommon, alien to the participants, and difficult to establish. This explained the few viable partnerships actually observable.[2] (Selection, Control, Linkage)

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[1]Herbert Hite, WWSC, telephone interview, 9/21/71.

[2]For further discussions of this problem see Edward T. Ladd, *Sources of Tension in School-University Collaboration* (Atlanta: Urban Laboratory in Education, 1969) and Paul R. Lawrence and Jay W. Lorsch, *Developing Organizations: Diagnosis and Action* (Reading, Mass: Addison-Wesley Publishing Co., 1969), Chaps. 2 and 4.

Educational decisions for the programs were made in a prudential but intuitive manner, depending upon the judgment and vision of the innovators. Decisions were often based on the opinions of participants -- students, faculty, and public school personnel. The data gathered from informal student reactions and teacher responses provided feedback on the vicissitudes of the enterprise. (Control, Cybernation)

The *scope of the programs* encompassed the professional component[1] only. Extending the characteristics described in the analysis of the programs to general education and other disciplines was identified as desirable, but no specific plans had been made to extend PBTE into these areas at the time. When the performance-based approach was extended into other disciplines, it occurred incidentally and was not generally a result of intended planning. (Instruction, Linkage)

Recognition of *teaching as an area which can be understood and trained for* was evident in all programs. Generic qualities of teaching were identified and training programs were developed for them. There was stress on the analysis of teaching using training and protocol materials and interaction analysis schemes. (Instruction)

All programs moved from course structure to *modularization.* Modularization provided varied opportunities for self-pacing and for movement through the programs using varied instructional paths. These choices were based on an individual's specific preferences and needs as determined by preassessment tests, demonstrated ability, and experience. The thread of self-analysis and self-instruction ran through the programs. (Organization, Instruction)

The programs used *varied instructional resources* to provide alternative paths of instruction. Such materials as protocol and training materials were used extensively. These often required multimedia resources. A need was identified for an increase in such resources -- video and audio recorders; tape and cassette players; overhead, slide, and film projectors; television studios, receivers, and closed circuit television. Funds for the purchase of the items and accessories were in short supply. (Support, Instruction, Control)

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[1]The professional component includes the content for the teaching specialty, humanistic and behavioral studies, teaching and learning theory, and practicum, as described in AACTE, *Recommended Standards for Teacher Education*, 1970. pp. 4-6.

Development of *appropriate materials* was identified as a need. Many available materials were discovered to be inappropriate; the activities did not support the behavioral objectives. Great care should be used to develop modules which have useful objectives and materials and activities which are congruent with objectives. Modules should be appropriate and challenging to the users. (Instruction)

While the general inadequacy of *management systems* was not immediately apparent because of the comparative smallness of the scale, it can be anticipated that, unless there is adequate planning, problems will increase markedly as the programs grow. The tracking and monitoring of students and other personnel was not always efficient. The need for computers was identified and funds were needed for a management system to collect and store data retrievable for evaluation and research. (Management, Cybernation)

The *synchronization of college activities and field experiences* was sometimes dysfunctional. Achieving intersection of program and field activities by scheduling desirable experiences at appropriate times was difficult. Further joint planning and decision making might alleviate the situation. (Organization, Instruction, Management)

Research components were evolving, but none of the programs had available reliable and effective *assessment tools* which could report comprehensive hard data about multiple aspects of performance. Two of the programs were actively engaged in this activity, others were developing research designs intended for analysis of teacher behavior and product reaction. There was a need for better assessment and evaluation tools for teacher education research. (Cybernation)

The use of cybernetics was most apparent in analysis of *student performance and provision for student feedback*. With the focus on objectives, where attempts were made to identify them precisely, specifically, and publicly, the student was aware of his or her position in relation to the program expectations. As the student completed each segment of the program, his or her knowledge, skills, and performance were tested in paper and pencil examinations, and/or simulated or real teaching demonstrations. Assessments were made by the student, his peers, and faculty and field personnel, at times selected by the student. Feedback was prompt. The use of cybernetic learning theory was evident.[1] (Cybernation)

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[1]Karl U. Smith and Margaret Foltz Smith, *Cybernetic Principles of Learning and Educational Design* (N.Y.: Holt, Rinehart, and Winston, Inc., 1966.

Knowledge and performance *criteria* were used in all programs to assess the progress of the student. Product criteria were used only by some programs. It was felt that to determine product behavior, with the tools available, was not appropriate in most instances. Readiness for exit was based on the cognitive and affective growth of the student as demonstrated by acquisition and performance of specified competencies.

PBTE programs require *feedback to revise and change the interdependent components*. The sources for feedback were generally the opinions of users and clients--informal student reactions and college and school personnel responses. The programs all made strong attempts to be open and self-correcting based on input. It is quite possible that the "Hawthorne" effect, that of an enthusiasm for an innovation, might be mistaken for the success of the innovation. In the absence of hard data it was difficult to accept the enthusiasm of all concerned as evidence that the program itself was effective in making significant changes in teacher education and teacher performance. (Cybernation)

Proof of the value and success of PBTE programs should be determined by criteria such as the *actual efficacy in increasing system output*. Was improvement in learning and performance of students apparent? Did they become better, more competent teachers than those trained previously or those trained in other programs? Graduate follow-up seems essential. The multiplier effect might be another indicator. Was there stimulation or lack of interest and movement in other areas of the university or the school not originally involved in the innovation? The accomplishment of broader purposes than originally envisioned would be another criterion. Data should also be collected on the attitudes and skills of innovative staff members. (Cybernation)

There were *reasons for the infrequency or informality of program evaluation*. Few programs had yet worked out objective criteria for determining the effectiveness of the terminal behavior. Adequate and thorough evaluation was expensive in terms of time and money and most programs lacked funds for thorough evaluation. Data storage and retrieval systems were inadequate or non-existent. The imperatives of organization survival frequently precluded sufficient allocation of significant time, energy, personnel, and funds for thorough research. And, of course, the ardor and zeal which accompanied the experiment and which were quite evident in all programs frequently gave justifying strength, at least in the initial operational period. (Control, Cybernation, Management)

PBTE programs should be held accountable for their output -- the beginning teacher. Some competencies were identified and the

expected level of accomplishment was stated. A feedback system was established to provide information for revision and change as needs were identified. Therefore, PBTE programs were accountable to the degree that these competencies, criteria, and assessment techniques were specified. "Obviously, the teacher performance will be in terms of desired product but we are taking the position that we are only held accountable for what we did, not for what the outcome (pupil performance) is."[1]

Conclusions and Recommended Research

As part of a developing national movement, PBTE programs for the training of preservice teachers are here explored because they were innovative programs about which little data has been gathered. They were neither well-developed nor problem-free. Nevertheless they had made significant advances and, equally important, had opened up new paths for future exploration.

Conclusions

PBTE programs offer new ways of educational planning, of organizing and structuring teacher education. They may be regarded as vehicles of change. By virtue of their emphasis on field activities, which require a continuum of preparation, they can provide a bridge between pre- and inservice teacher education. Instructional strategies are designed to utilize learning theory and psychological principles. Through modularization and counseling, students are encouraged to learn in their own modes and to develop in their own styles. Through role integration, in which the student moves from the mastery of specific techniques in controlled situations toward situations which require diagnosis and the selective utilization of such specific techniques, the preservice teacher gains an increasingly comprehensive perception of teaching problems. Through the integration of new and traditional content and strategies, it is intended that students will become independent, capable of making decisions for themselves and the programs.

Through this vehicle, staffing takes on new dimensions. Often staffing was restructured -- differentiated or teamed. Retraining of participants with concomitant skill-updating occurs, so that participants are equipped for new roles, often in situations which require joint selection and appointment.

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[1]Oscar Jarvis, UTEP, telephone interview, 8/9/71.

Through their focus on specific competencies, the programs demand a clarity of purpose and offer opportunities for the identification of competencies and abilities necessary for successful teaching which are role-derived. In effect, the programs oblige educators to focus on their purposes and rethink their goals in order to meet the pressures and needs of school and society. They develop in all participants a potential for new and increased responsibility and accountability.

Opportunities to explore and research competencies are possible in the programs because objectives are stated specifically and publicly. The programs, though the use of technological tools for data collection, storage, retrieval, and analysis, have the potential to amass sufficient data about teaching to begin to investigate process-product teaching effects. This potential holds great promise for educational research and for the further development of the field of educational assessment and evaluation.

These promises can be fulfilled if the management and cybernation systems are considered to be integral parts of the programs, are planned and developed as integral program systems and not tacked on as afterthoughts. With appropriate provision for development and implementation of these systems the programs offer powerful potential for the acquisition of new information about teaching and its impact on pupils.

With the stress on field experience and the emerging, though sometimes inadequate, collaboration between segments of the education community, it becomes apparent that there is the possibility for a new educational institution -- the teaching center -- to develop. Such a center would coordinate the activities of the institutions engaged in teacher education and would provide a site in which performance criteria would be formulated, supervised, and evaluated. It would house pre- and inservice programs and might also engage in research and development as well as evaluation for performance-based certification.

In view of the desire to train teachers better equipped to meet societal needs and in view of the present shortage of teaching positions, it would seem that the time is opportune for the development of PBTE programs. The specificity of performance required by the programs acts as a screen to determine teacher competence through performance criteria. It appears that PBTE offers a potential to raise professional standards and encourage the profession to be responsible for the development and maintenance of such standards.

Finally, what is useful for the education profession might

also be useful for other professions. Performance-based training programs offer the alternative of professional training based on competency models designed to provide and enhance a multitude of skills which the profession identifies as desirable to make the professional a competent practitioner and effective change agent within his profession. The vehicle for change offered by performance-based teacher education to the teaching profession need not be exclusive to this profession. Rather, the approach offers potential to all professions.

Recommended Research

PBTE is an umbrella that covers many parts. This study sought to identify some of the areas involved in preservice teacher education programs through extensive investigation of the sample rather than intensive coverage of specific elements.

The researcher believes that the areas touched upon in this report would benefit from deeper, more penetrating analysis which would enhance the prospects of PBTE and demonstrate its usefulness. An in-depth examination of each of the systems identified in the analytic framework used to present the data would be useful and fruitful. Information about their development and operation might benefit others intending to develop such programs. Management and cybernation systems, in particular, would benefit from further research. Attempts to optimize the operation of these systems in PBTE programs would also be useful.

Intensive and continuous research for validation of essential objectives and competencies, as well as validation of the instructional procedures developed to accomplish them, needs to be carried out. Data and analysis are needed to relate a teacher's behavior to pupil learning; to provide graduate follow-up to determine whether graduates perform in a manner consonant with the program's objectives; to develop more comprehensive tools of assessment which will enhance the feedback system.

Through such analysis and research it might be possible to strengthen the unstable theoretical base upon which PBTE now stands. To further enhance theory it would be productive to investigate the differences between products of programs whose criteria are in terms of teacher performance and those which attempt to define criteria in terms of process-product criteria. An extensive examination of the terms "performance-based" and "competency-based" in order to clearly and successfully differentiate between the two would be useful to clarify the language and indicate differences.

Finally, research and development in innovation, itself, should be attempted. Successful application of innovation and change theory to performance-based teacher education programs offers the possibility of further strengthening the philosophical and theoretical base of PBTE.

To sustain these programs in their attempts to develop and demonstrate their potency, funding should be provided. The USOE has provided some funds for development and these should be continued. They could be used: 1) for continued support for planning and implementation over a five-year period of time, 2) for the establishment of a clearinghouse which would disseminate information about programs and materials (This could be a data bank from which institutions would select models of necessary modules. Although it has been established that modules developed for one program cannot be used for another without modification, a central exchange would be useful.[1]), 3)for research and evaluation (A long-term effort should be financed to establish the efficacy of PBTE programs. Too often support is removed before innovations have been thoroughly implemented, evaluated, and institutionalized. In order to avoid this, it is essential that PBTE programs be given the opportunity to prove themselves effective and not simply the most recent fad in a series of attempts to improve teacher education.).

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[1]This, however, suggests certain problems. Should the materials be copyrighted? By whom? Who should be considered the author? What kind of credit should the developer of the material receive? Should the material be sold? If so who,receives the money?

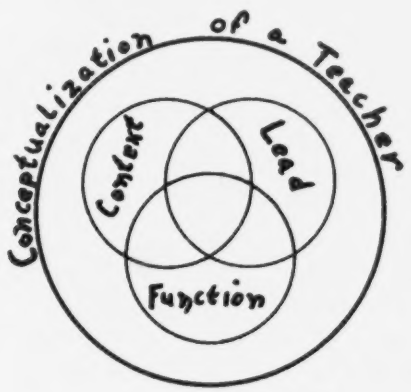
Part II

DESCRIPTION OF THE PROGRAMS

Conceptualization

Men seek to cope with their environment by establishing systems with specific purposes. As the environment changes, better solutions are sought to solve new environmental problems. Teacher education programs can be viewed as systems designed to respond to the environment's (society's) needs. PBTE is an effort to develop an optimally flexible system to keep pace with rapid societal changes.

Figure 2.



Program development is contingent upon the conceptualization of the teacher who is to be trained. What are the purposes these programs must serve which will keep pace with the rapid societal changes? When these purposes are identified, then processes and content appropriate to them can be established. Three basic questions any teacher education system must answer when developing its rationale are: 1) When in time will the teacher function? (lead) 2) Where will he or she operate? (context) 3) What will the role of the teacher be? (function).[1]

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[1]These categories and others in this section are derived in part from S.C.T. Clarke, "Designs for Programs of Teacher Education," in *Research in Teacher Education: A Symposium.* Edited by B.O. Smith, (Englewood Cliffs, New Jersey: Prentice Hall, 1971) pp. 119-154.

Through the development of a model of a functioning teacher within a specified setting and time, terminal objectives can be formulated through task analysis from which can be derived performance objectives. Thus, the system's purpose or conceptualization tells us the reason for the system's existence and establishes the conditions for all components of the system.

The viewing of the seventeen programs covered in this system will be facilitated by examining them in light of this trinity since their conceptualizations or rationalizations all have as their primary focus at least one of these three.

More than half of the programs studied are concerned with improvement of present conditions in the near future; four are oriented to the decade ahead as they plan in terms of the needs of the Seventies and attempt to project the roles of the teachers in the context they foresee for the decade to come. Two of the programs, TCCU and UU, are less concerned with extent of lead and context, but concentrate on developing a teacher who can meet the needs of many situations within varied contexts.

The conceptualization of the Life Internship Program (LIP-UU) is a well-developed psychological rationale which views school as a setting in which lifelike problems are presented and solutions attempted. Asahel Woodruff defines education as "the continuous deliberated cultivation of the ability to make wise decisions and execute them effectively, in all behavioral areas, through the life of a person."[1] Because of this teachers should have "the ability to establish and maintain conditions in the schools which are capable of producing planned behavioral changes in students."[2] School is a place to develop performances which will help solve real-life problems. From this conceptualization of context the specifics of teacher performance and behavior are derived.

The TCCU program views the teacher as an innovator having four roles: the institution-builder or shaper of the school who works with colleagues, community representatives, and other interested parties to design educational programs and organizational structures to bring them into existence, 2) the interactive teacher who

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[1]Asahel Woodruff. "An Experimental PBTE Program." Salt Lake City: University of Utah, 5/25/71. (Mimeographed)

[2]Ibid, p. 1.

has control of strategies for making instructional decisions tailored to the needs and characteristics of the pupils, who in company with his colleagues is able to structure and effect change among his pupils, himself, and his colleagues, 3) the innovator who combines personal creativity with ability to work cooperatively with others to develop innovations (he has techniques of analysis), 4) the scholar who engages in continuous scholarship, training renewal, and research that relates to the discipline he teaches.[1] The context is not specifically indicated, nor is the lead, but it appears that this conceptualization has a timelessness about it which would permit it to operate in many contexts.

Although no other program combines these four roles of the teacher, others do conceptualize the teacher in terms of one or more of the dimensions. The concept of the interactive teacher is universal. The programs view the teacher as someone who can bring about learning in children through appropriate changes in pupil behavior. This is accomplished through development of instructional strategies based on awareness and concern for individual differences in order to achieve a wide variety of teaching purposes.

The teacher as an institution builder is another conceptualization in which the teacher has the capacity to work with others to design a complete educational program and organizational structure to bring it into existence. He utilizes strategies for studying and designing curriculum systems; analyzing and creating effective social systems in the school; and employing technical support systems which facilitate education.[2] SUCB, too, has this functionary vision of the teacher.

An attitude of inquiry and analysis is stressed in many rationales which supports the conceptualization of the teacher as a scholar-researcher (SMSC, BYU, U of Wash, WWSC). This view

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[1]System Development Corporation, *Analytic Summaries of Specifications for Model Teacher Education Programs*, (Washington, D.C.: U.S. Dept. of Health, Education & Welfare, Office of Ed., National Center for Educational Research Development, 10/69), pp. 23-24.

[2]Bruce Joyce. "Variations on a Systems Theme: Comprehensive Reform in Teacher Education," *Interchange*, Vol. I, No. 3 (1970), pp. 83-95.

suggests that the teacher analyzes and researches his behavior and those of his charges as he diagnoses, makes decisions, evaluates, and counsels.

Some programs do not identify the specific function, but rather describe the context in which they envision the teacher working. From this context and lead then emerges the functions of a teacher implied from the context. The leads in these rationales are fairly short-term, looking at education in the Seventies. With the acceleration of technology and the speed with which change takes place in contemporary life, it is not difficult to understand the desire to predict and plan for the near future rather than the distant future. By developing fairly open system designs, the developers hope to accommodate the needs of the distant future as well as the Seventies through the cybernetic qualities of the systems approach.

A number of programs envision contexts which require differentiated staffing (U of Ga, SUCB, UTEP, FAMU). The teacher is viewed as an administrator who can work in a team of differentiated staff, supervising, planning, counseling, and sharing with other members of the staff.

Others envision schools which will be ungraded and include Continuous Progress Education. They will be multi-unit institutions committed to individualization of instruction, team teaching, and modular scheduling and instruction (BYU, SMSC). Others view schools as centers of teacher training where the schools and the colleges will be jointly responsible for the competency and supervision of the teaching candidate (U of Wash, WWSC).

One college (UTEP) takes a pragmatic stance in regard to the teacher's function and the role of the school in the education of the child and simply states that in the past the needs of Mexican-American children have not been met. It is incumbent upon this teacher training institution, with the support of the state agency of education and the federal government, to concentrate on meeting the needs of these children by identifying what these needs are and developing a teacher education program which trains teachers to deal with the children in terms of their culture, their beliefs, and their language. A cross-cultural program will improve and, hopefully, change the quality of education for Mexican-American children.

LU, as well as UTEP is attempting to prepare teachers for the present to meet the needs of the underprivileged in their immediate environs.

Objectives

"Objectives are to be deduced from the purpose of the system."[1] "It is the *terminal* student performance objectives that denote the final criterion of performance. They exist as valid representations of the instructional goals, regardless of what else is done in designing the instruction. Enabling objectives, in and of themselves, are not instructional goals. Rather, they represent the immediate learning demands for attaining terminal objectives."[2]

Terminal objectives are not readily apparent for some programs, although they can be inferred from the conceptualization of the role of the teacher when this is clearly stated. They are often quite broad. In most cases they are determined by education faculty. (LU, FAMU, SMSC, TCCU, WCS, BYU, UTEP, UU) In a few cases (U of Wash, WWSC, LU, FAMU) they are determined through joint collaboration of public school personnel, professional organizations, and college faculty. At BYU, for example, the objectives for the program are determined by four sources:[3]

1. research on effective teaching and learning
2. analysis of communication problems
3. results of staff's personal experiences
4. student data

It is also possible to use these sources for the determination of objectives for instructional modules, which in most cases are arrived at individually by faculty members responsible for the subject area.

Although directors of the programs readily admit the desirability of process-product objectives, most behavioral objectives are stated in terms of teacher performance which is more readily visible and more easily measured. To achieve a process-product

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[1]Banathy, *Instructional Systems*, p. 33.

[2]Harry L. Ammerman and William H. Melching, *The Derivation, Analysis, and Classification of Instructional Objectives.* (Fort Bliss, Texas: HumRRO Division No. 5 (Air Defense), May, 1966), p. 38.

[3]J. Hugh Baird, W. Dwayne Belt, and Lyal E. Holder, *The Individualized Secondary Teacher Education Program at Brigham Young University.* (Salt Lake City: The Utah State Board of Education in cooperation with the Multi-State Teacher Education Project, M-STEP Monograph #2, n.d.,).

objective is difficult because of the lack of immediacy and the variety of intervening variables for which the teacher cannot be held accountable. It is hoped that in the future as research and assessment tools become more sophisticated and refined, more of these objectives will be possible. An example of terminal objectives follows:

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Performance Objectives - STEP

1. Participants will demonstrate knowledge of important physical, psychological, social, and emotional characteristics of learners at various stages of growth and development.

2. Participants will demonstrate their knowledge of the important aspects (determinants) of learning and learning processes.

3. Participants will demonstrate (a) knowledge of the concepts and structure basic to the subject specialization of their intern assignment, (b) skills in the instruction of learners as evidenced by developing objectives; diagnosing needs; prescribing experiences; selecting, planning, organizing and using teaching strategies, reinforcing and evaluation, and (c) skill in processes of communication and in using instructional technology.

4. Participants will demonstrate knowledge of the organization, procedures, personnel, facilities, and community relationships of selected public schools.

5. Participants will demonstrate the professional role of an educator by being involved in planning, implementing, evaluating, and disseminating educational programs within the educational system.

6. Participants will develop and demonstrate a positive concept of self in relation to the environment in which they will be expected to work, i.e., their place in the ecosystem.

7. Participants will demonstrate through their unique teaching style those characteristics and skills

considered through criticism of experience and research to be desirable for all teachers.[1]

Richard L. Turner[2] has developed levels of criteria which are intended to indicate points at which feedback to teacher education programs could be generated and performance-based certification could occur. These levels are also applicable to the orientation of objectives from teacher performance to process product. He has identified six levels along a continuum from low (level 6) to high (level 1) confidence. A brief description follows:

Level 6 indicates student understanding of a behavior, concept, etc.

Level 5 provides that the student be able to simulate through demonstration a teaching skill. This is useful for providing information about the efficacy of training materials and modules.

Level 4 provides controlled experiences so that variables are limited. The teaching context and teacher behavior observed are limited as in microteaching with peers or students.

Level 3 allows for judgments of competency based on observable behaviors of teachers and is gauged on the quality of his professional actions. This is useful to determine explicitly whether the teacher is behaving in a way the program claims he should behave.

Levels 1 and 2 demonstrate relationships between observed behavior of teachers and pupil performances identified. It will indicate the types of teacher behavior most likely to influence particular changes in pupil behavior.

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[1]*Orientation Booklet for AACTE Committee on Performance-Based Teacher Education*. (Seattle, Wash: University of Washington, College of Education, Nov. 29, 1970).

[2]Richard L. Turner. "Levels of Criteria," Appendix A in *The Power of Competency-Based Teacher Education*, Project No. 1-0475, Prepared by the Committee of National Program Priorities in Teacher Education, Benjamin Rosner, Chairman. (Wash., D.C.: National Center for Educational Research and Development, USOE, July 31, 1971) pp. 35-37.

Summary

Although all programs have rationales explaining why they are engaged in PBTE, not all have clearly stated conceptualizations of the end product, the functioning teacher in context and lead. Terminal objectives for the programs are not always clearly stated, nor are they always apparent from the written material. Some objectives are in the process of development or revision; some have not been agreed upon by the participants. Enabling objectives for modules and clusters are common and can be found in all programs. When modules combine into clusters or units, terminal objectives for this aspect of the program are apparent.

Objectives are generally determined by faculty, either jointly or individually. Other members of the profession -- public school personnel and representatives of professional organizations -- have little to do with the development, except in a few cases where they act as advisors. Objectives for what would traditionally be considered content areas are determined by the course instructor. Because objectives for the program are often broad, criteria on which to determine competency are somewhat impressionistic and subjective. This is less true in the modules and clusters which deal with a limited portion of the total program.

Selection

The selection system provides the process by which participants in the programs -- organizations and individuals -- become involved.

Organizational participants in PBTE programs to date have included: institutions of higher education, public school districts, professional organizations, and state education departments. Participation is either spontaneous, as when the institution offers to take part, or responsive, as when its participation follows a request for its involvement. Individual participants have entered the PBTE programs through organizations with which the individuals are affiliated.

Organizations

Frequently innovations are triggered, shepherded, and/or nurtured by an active person or group external to the target system, or within the organization.[1] In all but one instance the change

[1]Matthew Miles, ed. *Innovation in Education* (New York: Teachers College Press, Teachers College, Columbia University, 1964) p. 639.

agent was an internal agent. An attempt was made by a public school administrator to find a college which would prepare teachers for the needs of a school system. He promised the necessary human resources for retraining the faculty so they, in turn, could prepare students to teach in an individualized program. This change agent was external to the college system and provided the support of the public school system.

In another instance, SUCB-UUTEP is attempting to update a school system through the training of preservice teachers in the public schools for three semesters. In order to develop and implement the program, the district administration and professional teacher organizations are involved in planning with the college.

At SMSC, a new college established in 1967, prior to the operation of the teacher education program the Education Division Director met with school administrators from surrounding districts frequently to identify their mutual needs and ways in which each organization could serve the other. An Advisory Council made up of public school administrators, teachers and Regional Laboratory personnel was formed to determine the role of public schools in preservice teacher education.[1] This council was replaced by the Teacher Center Council. (Discussed in section on Control.) Because the purpose of the program is to produce competent teachers, field experience is assumed to be necessary. In order to implement the programs, public schools are selected and involved. Often the basis of selection is geographical proximity and willingness to participate (WSC, FAMU). Sometimes, as in SUCB-UUTEP and UTEP, the need of the district dictates participation.

Although geographic proximity is often a factor, there are exceptions. WWSC sends students to a city seventy-eight miles distant to live and work on-site for two quarters. Here, the school district requested the program as needs within the district were identified.

Faculty

The method of selection of faculty for the program varies. The programs can be divided into two groups: those having total

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[1]For a detailed description of the development see *Southwest Minnesota State College, Report for Accreditation Visit, State Department of Education* (Marshall: Southwest Minnesota State College, Division of Education, April, 1971) pp. 3-7.

programs (no alternative means to certification) and those having parallel (alternate) or pilot programs. As Table 2 (Appendix) indicates, there are five total programs, seven parallel or pilot programs, and one (U of Ga.) which is committed to a total program and is moving in that direction.

The faculty involved in the total programs underwent training and workshop sessions, inservice preparation to familiarize them with the characteristics and conceptualizations of performance-based teacher education programs. They examined and studied the ten models of Elementary Education which were funded by the USOE. Faculty members who felt they could not operate in this kind of program or were philosophically opposed to it found positions elsewhere. In the case of SMSC, which was a new institution, faculty members were hired who had an interest and commitment to this kind of education.

In the parallel and pilot programs, faculty members are volunteers, some of whom participate in addition to their regular work loads (FAMU). In other cases, PBTE duties are included in the regular workload and released time is provided (UU).

Regardless of the nature of the program, staff retraining is essential.

Public School Personnel

In general, the involvement of public school personnel can be described as responsive. The school systems are contacted and elect to participate in the programs; the school administration determines whether the individual school participates and finally, the participation of the classroom teacher is voluntary.

In some instances the cooperating teacher[1] is required to have prior inservice training before being allowed to participate in the program.

The team leaders of the Teacher Corps programs are volunteer public school staff members who are required to have extensive training, while the classroom teachers with whom the team works may not.

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[1] Called the professional associate in U of Wash., the classroom teacher is the lead teacher in SUCB-UUTEP.

In other programs, informal inservice training is available as the program develops. The latter occurs through occasional seminars, meetings, and conferences with center directors and college personnel who operate in or visit the schools.

Mutual selection of personnel is a characteristic of some programs. Joint appointments of center directors occur. (SUCB-TC and UUTEP, SMSC, U of Wash.) In the case of U of Wash. the center directors (field coordinators) are public school personnel whose salary is paid by the university (Appendix, Table 5). The program directors, however, are all college faculty members. A job description for field coordinator is found on the following pages.

Students

Students are permitted to enter the program during or after the sophomore year (Appendix, Table 2, duration) except at CSS, where the elementary education program permits entry as a freshman. The criteria for entry are 1) acceptance into the college, and 2) acceptance into the College of Education through satisfactory fulfillment of its requirements, often as indicated in work in general education courses prior to the entry period, and through recommendations and tests. The Teacher Corps programs require that students meet Teacher Corps standards, with the additional requirement at UTEP that the student be bilingual in English and Spanish.

In secondary programs such as FAMU, UU, BYU the students are mostly volunteers who have received approval to participate from the academic major department. At UU the student must be near completion of his academic major. Commencing Spring 1972, BYU's program will be required for music majors.

A common entry pattern can be found in Figure 5.

Although there is no alternative program at Weber, self-selection is an important factor as information about the program circulates among the student body. The director believes students now applying for admission to the School of Education are of a higher caliber, more able, and more committed to education than previously. He attributes this to the more stringent demands PBTE programs make on students.[1]

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[1]Blaine Parkinson, private interview during visit to Weber State Campus, November 1, 1971.

Figure 3.

RENTON SCHOOL DISTRICT NO. 403
Department of Instruction
September 21, 1970

JOB DESCRIPTION

1. IDENTIFYING INFORMATION

Title: Field Coordinator for Renton Teacher Intern Program

Location: Administration Service Center

Work Year: 191 days Hours: 8:00 - 5:00

Immediate Superior: Administrator of Instruction (Renton School District)

Program Coordinator and Director of Special Teacher Education Program (University of Washington)

Immediate Subordinates: Assistant Field Coordinator

Interns (responsibility shared with principals)

Requirements:

Minimum - Masters Degree
Preferably candidate should hold a Doctoral Degree or be working toward one.

Experience: Minimum of 5 years teaching experience.

Teacher Education experience - candidate must have had prior experience supervising student teachers or possess equivalent teacher education experience.

Leadership qualities - credentials must indicate leadership qualities as well as superior professional attributes such as initiative, responsibility, and decision making skills.

II. SUMMARY OF ASSIGNMENT

Responsible for: development, evaluation, and interpretation of the intern program; coordinating field assignment of interns; selection, supervision, counseling and evaluation of interns; developing and teaching intern-related courses.

III. SPECIFIC RESPONSIBILITIES

A. Primary Responsibilities

1. Responsible for program development and quality control.

2. Liaison between district administration, professional association, University of Washington, building principals, classroom teachers, and interns.

3. Responsible for continuous evaluation of program and channeling of recommendations to appropriate agency.

4. Responsible for carrying out policy decisions of the College of Education, the Renton School District and the Renton Education Association as they relate to the Intern Program.

5. Responsible for coordinating intern's field experiences and on-campus preparatory experiences to provide the most effective and personalized program for each intern.

6. Responsible for field assignment of each intern following consultation with principals, field associates and Assistant Field Coordinator and interns.

7. Responsible for designing and implementing seminars, classes, and meetings for interns in the field.

8. Counselor for interns.

9. Responsible for recruitment and selection of interns.

Figure 3.

10. Responsible for intern-related inservice education of field associates.

11. Responsible for reinforcing observation and evaluation efforts of field associates.

12. Participant in planning and implementing on-campus teacher education experiences; member of Instructional Staff.

13. Responsible for keeping abreast of current developments in teacher education.

14. Referral source for problems requiring administrative decisions.

15. Responsible for assisting and informing assistant field coordinator.

B. Secondary Responsibilities

1. Responsible for orientation of interns to the program.

2. Participant in evaluation of interns; has final authority in terminating intern's participation in the program.

3. Responsible for advising Personnel Department of intern's progress and recommending that he or she be awarded a teaching contract.

4. Responsible for writing recommendations for interns.

5. Member of committees which aid in formulating policy for Intern Program.

6. Responsible for interpretation of Intern Program to educators and laymen.

7. Responsible for maintaining close communications with the University Director of the Intern Program, the Education Advisory Office, the Office of School and College Placement, and the Office of Field Experiences.

8. Responsible for planning budget for Intern Program.

9. Member of team which selects assistant field coordinator.

Figure 4. STUDENT ENTRY INTO PBTE PROGRAMS

Voluntary	Required
FAMU	LU
SUCB	U of Ga
UTEP	CSS
BYU	SMSC
UU	TCCU
WWSC	WSC
U of Wash	

Summary

The initiation of PBTE programs is most frequently done by an internal agent who invites other organizations to participate. The participation of organizations and individuals can be classed as spontaneous (the initiating organization) or responsive (the invited organization). Self-selection by organizations and individuals is common. School districts participate on the basis of interest, need, and/or geographic proximity. Public school personnel are generally responsive participants and engage in formal or informal inservice training. Center directors, where they exist, are jointly selected and appointed by the participating organizations. College faculty participate voluntarily and commit a great deal of time to retraining themselves, and to program planning and implementation. Students volunteer for the programs unless they attend a college which has a "total" program. After screening of their previous college course work and examination of recommendations, students are permitted to enter programs during or after the sophomore year.

Support

Innovations require the interdependence of a complex network of groups, individuals, and organizations.[1] Performance-based teacher education programs are such innovations. The individuals and groups involved in the selection process have been discussed in the previous section. The subsystems of the support system, psychological, financial, technical, and physical plant provide assistance necessary for the development and implementation of the programs.

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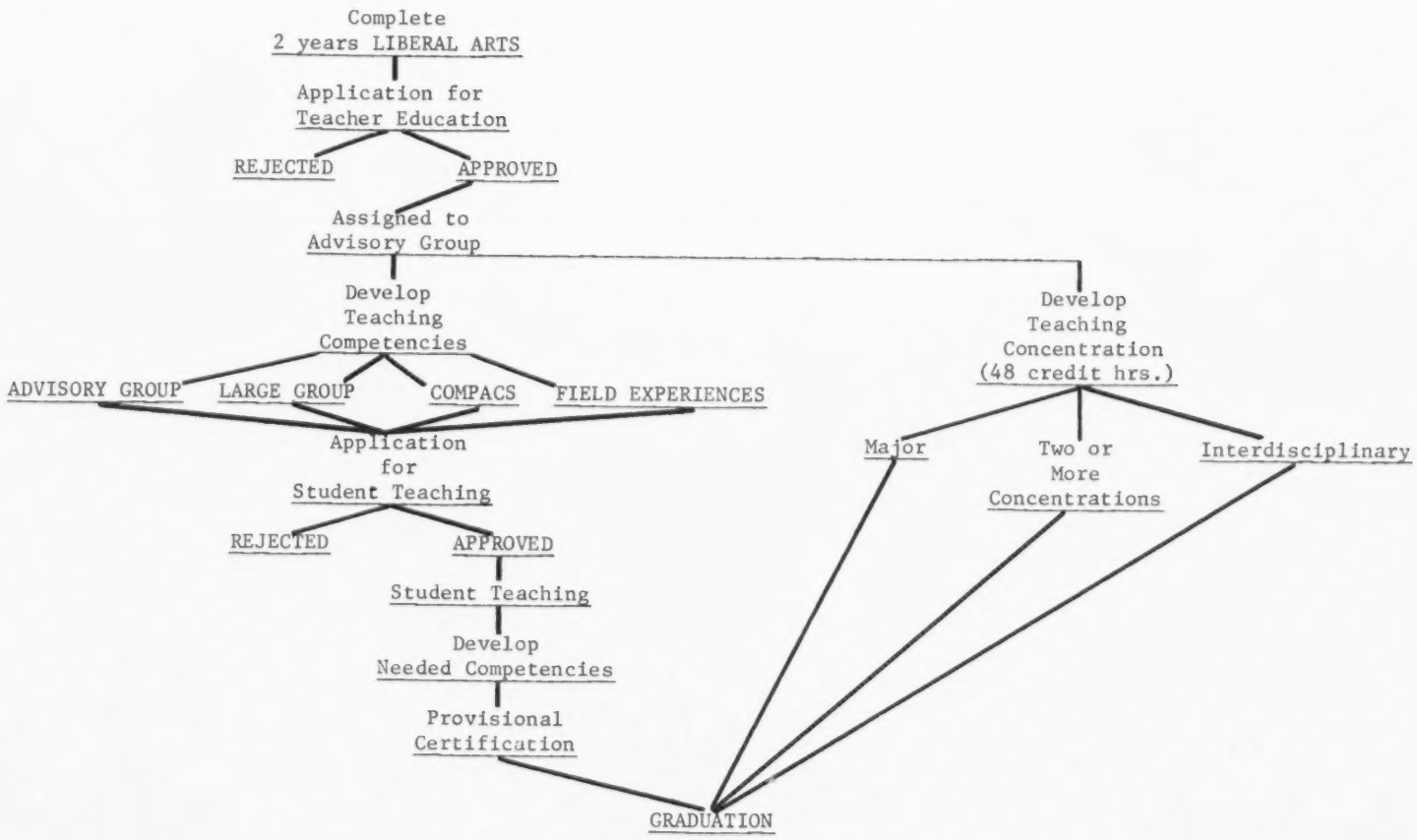
[1] Miles. *Innovation in Education*, p. 639.

Figure 5. FLOW CHART OF SOUTHWEST ELEMENTARY EDUCATION PROGRAM



Example of student entry - William M. Bechtol, "Competency-Based Teacher Education: The Southwest Program." Paper presented to the annual convention of the National Department of Elementary School Principals, Cleveland, Ohio, April 16, 1971.

Psychological -- College Administration

The support of people with power is crucial in the introduction of an innovation.[1] College administrators have such power, and thus can aid or prevent innovations. In the programs under examination there are many instances of administrative support. As cited in the selection section, CSS's change to PBTE was due to the stimulus of an external agent. However, the psychological support for this innovation came from the administration of the college, in particular the college president.[2] In other instances, the deans of the schools or colleges of education were interested and supportive.

This support took different forms. In some instances, the innovators were given approval to work on an experimental or pilot program and some clerical help and space facilities were put at their disposal. Others were more fortunate and received funds and released time to develop the PBTE program envisioned. SMSC had a general commitment to preparation for real-life experiences, and thus, had a commitment to PBTE from the inception of its Division of Education.[3]

Faculty

Innovations often have the support of high status members of the target systems. In the case of PBTE programs, faculty members are included in this group.

After agreement and interest were demonstrated by administrators, it was necessary for the innovators to familiarize the faculty with intended actions and gain their cooperation. As can be seen from Table 2 some colleges adopt this commitment from the beginning and involve the total faculty in orientation procedures immediately. Faculty who do not accept this commitment (very few) find other positions. Those who remain help develop the programs.

The commitment of faculty involved can be discerned by the fact that participation in orientation and program development required time commitments far beyond the regular professional responsibilities.

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[1] Miles. *Innovation in Education*, p. 641.

[2] Thorwald Esbensen, telephone interview, August 24, 1971.

[3] Marion L. Shane, Dean of Faculties. Interview held during visit to SMSC, July 7, 1971.

Some institutions were fortunate and had faculty who were not only interested in PBTE but who also were knowledgeable. Two programs, TCCU and U of Ga, had been funded as USOE Elementary Education Models and had had funds for exploration and development of programs along systems design lines, incorporating establishment of performance competencies and objectives. SUCB hired two new faculty members who had participated in the development of the MSU model. The chairman of the Department of Education at WWSC had been an active participant in the development of the Comfield Model. The chairman of SMSC had participated in the development of an unfunded model. FAMU and LU were able to utilize consultants from the models.

Public Schools

PBTE programs require a variety of complex psychological supports which would be incomplete without including the public schools. In order to provide field experience the support of the local school system was a necessity. Duluth, cited earlier, provided psychological as well as technical support through the involvement of an assistant superintendent. Other programs had worked with local public school systems prior to implementation to determine needs, and to plan a program that would be mutually productive and useful.

Some school districts actively participated in development of procedures, priorities, and programs by participation on community councils, steering committees, policy councils, and so on. Professional organizations also participated in these activities, particularly those concerned with SMSC, SUCB-UUTEP, WWSC, and U of Wash. (Involvement will be further discussed in the section on control.)

Most of these programs are developed by internal agents, and all have the support of a powerful administrator, as well as some faculty support. Much of the support can be attributed to an internal desire for change. A desire to integrate theory and practice more adequately, to develop and use innovative practices, and to make use of technological progress are some factors causing the internal dissatisfaction which abet the change to PBTE programs. In 1967 the education faculty of the U of Wash began a complete reexamination of its teacher education program. A plurality of programs from which students may select, resulted. BYU developers felt the program should keep up with the changing times, interpreting concepts in terms of reality. CSS looked upon the program as an opportunity to develop training in individualized instruction.

Funding

Many forces working within or between subsystems which can be classed as educational agencies condition innovative attempts.[1] When the external funding aspects of the programs are examined, this hypothesis is supported. The following table illustrates support provided by the federal government through the USOE.

Figure 6. INFLUENCE OF USOE (Through Allocation of Funds for Various Programs)

Federal Support	*Recipient*
Teacher Corps	LU, Cycle III, IV SUCB, Cycle V, TC/Peace Corps WWSC U of Wash TCCU -- tangentially through information concerning materials and advisement
Southern Consortium	FAMU, LU
TTT	WWSC, UTEP and whole Texas Performance-Based Project
BII Programs	Florida, Washington
Other Federal Funds	U of Wash (three programs) WWSC, EPDA Early Childhood SUCB-UUTEP, EPDA

Among Teacher Corps, Southern Consortium of Black Colleges, TTT, EPDA, and the USOE models there is a stress on systems design, which requires identifying objectives in measurable ways so that indicators of competence can be specified and the product of the system can be assessed.[2]

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[1] Miles, *Innovation in Education*, pp. 632-633, Chapter 25, "Innovation in education: Some generalizations," pp. 631-661, provides many generalizations which are supported by the research of this study.

[2] *Teacher Corps Guidelines: Information and Guidance for Preparation and Submission of Proposals for 1971-73 Teacher Corps Projects*, Final Draft (Washington, D.C.: U.S. Department of Health, Education and Welfare, Office of Education, October 1970).

States

The states have supported PBTE through the funding of certain projects, provision of seed money and consultants, and certification modification. Many of the state colleges and universities have new well-equipped buildings with materials and facilities useful in PBTE programs.

Figure 7. SUPPORT OF STATE DEPARTMENTS OF EDUCATION

Alabama	a. Consultants to LU from State Education Department b. Southern Alabama Research Consortium
Florida	a. PB certification movement, BII modules, (developed thru EPDA funds) b. M-Step participant - research c. FAMU well-equipped School of Education
Minnesota	a. State PB certification movement b. Development and support of new college, SMSC
New York	a. PB certification movement b. Encouragement of collaboration and cooperation (SUCB-UUTEP differentiated staffing)
Texas	a. PB certification movement b. UTEP, funds for new building and equipment c. Federal Funds through TTT project administered by Texas Education Agency
Utah	a. USOE money through Dept. of Public Instruction b. Funds for WSC program, new building to open '72 c. Partial funding and certification adjustment for UU d. M-Step participant
Washington	a. PB certification movement b. Involvement in M-Step, U of Wash, WWSC

Foundations

Other agencies have been involved in aiding the development of these programs. The Carnegie Foundation gave a grant of $200,000 to WSC which allowed the entire education faculty to hire replacements for seven months while the regular faculty planned the program and developed initial materials. No other institution in the report was so endowed.

Technology

PBTE programs are concerned with using new technology and media in the programs. They attempt to take advantage of the technical progress made in the past decade and utilize it in the implementation of the program. This technical aspect includes hardware and software as well as technicians and organizations with necessary expertise who become part of the program or participate as consultants.

Because of the Carnegie Foundation grant, WSC was able to call upon two business corporations to act as consultants to aid in development of materials. The Thiokol Corporation collaborated in the development of the Human Relations Laboratory used to develop communication and intergroups skills. EPIC was hired by WSC to develop educational objectives. A representative of EPIC is now assisting in the development of an observation system.[1]

All had some hardware such as video, audio, tape and cassette recorders and players, slide viewers, film projectors, and record players available to them, either through the university, the schools, or both. Duplicating machinery was also available through the institutions. A pooling of resources where appropriate to the program is common.

Physical Plant

In the development and implementation of PBTE programs, physical facilities must be available which have the capacity necessary for housing materials and personnel. The physical plant can include workrooms and space on campus, facilities in a school or community, or a combination of these elements. Within the plant support system must be the capacity or potential capacity to house the participants, the materials, and to provide opportunities for the development of competence in a clinical or practicum situation.

Programs were planned and begun, while new plant facilities were still incomplete. New buildings are due in 1972 for WSC and SMSC. Others, as SUCB, had buildings renovated to suit their needs as the programs were implemented.

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[1] For an in-depth description of the program at Weber State College see Casseel Burke's "The Individualized Competency-Based System of Teacher Education at Weber State College: A Case Study," AACTE, 1972.

Space was found on some campuses and converted to the needs of the program. BYU has an old building on the edge of the campus; the garage serves for a microteaching laboratory, the basement for an instructional materials center and large gatherings. LU was able to plan and build a learning center with a viewing room, individual carrels, and human relations laboratory. The faculty of LU helped to build the individual study carrels and helped make other physical plant changes necessary to support the program. CSS provided the few changes necessary to implement its program. Such things as carpeting to absorb sound, storage cabinet dividers, and so on, as would be found in open, individualized classrooms, were provided. Others developed a new program in a new well-equipped building which did not require any homemade materials (UTEP, FAMU, U of Ga). Three programs were field-centered to the degree that all activities occur there (SUCB-UUTEP, WWSC, and UU-LIP).

Summary

Psychological support is acquired from 1) a powerful central administrator who supports the program; 2) a nucleus of faculty volunteers who are willing to undergo orientation and retraining, and to commit extra time to program development; and 3) school districts, which share their facilities, materials, and personnel with the colleges. All are motivated to try PBTE in order to combine theory and practice, use innovative practices and current technology, and keep up with rapidly changing times.

Funding is provided through external sources such as the USOE grants to various programs, and the state departments of education which provide funds for new buildings, improved facilities, equipment, new programs and, in one instance, by a philanthropic foundation.

Technical support is provided through consultants knowledgeable about systems design, material development, and use of hard- and software. Acquisition and accessibility of materials is also provided.

Physical plant support exists in the form of new buildings, renovated buildings, appropriate rooms, and public school space.

Control

The control system is the decision-making component. Its membership includes organizations listed in the selection system.

The members function independently or in consortia, policy council, or advisory council. Institutional responsibilities and policy and program determination are among the items requiring decisions. Other organizations -- state legislatures which pass certification legislation and the universities with degree-granting powers -- participate in the exercise of control over teacher education programs. Individuals, too, engage in control and decision-making through identification of performance criteria and reaction to instruction and experiences of the program.

Because all programs include field experiences, interinstitutional arrangements are essential; however, the degree and the manner of involvement vary. For some programs the public schools act as receivers in return for additional manpower. Their advisory and decision-making powers differ little from those of traditional programs. The program has been developed by college faculty.

In contrast to this, programs with well-organized field centers have frequently worked cooperatively with the public schools in identifying purposes, objectives, and instructional strategies.

As part of the Texas TTT Project, UTEP is committed to collaboration among varied groups. Involved in development of behavioral objectives and performance criteria for the programs, studying other programs and participating in workshops with consultants were cooperating teachers, principals, and supervisors of the El Paso School District, personnel from Region XIX Educational Service Center, Consortium F, and university personnel.[1] Based on input and recommendations from these groups, the college faculty developed the pilot program which is presently being field-tested.

Prior to implementation, faculty and public school personnel involved in SUCB-UUTEP program met twice weekly for one-and a-half years to plan and develop the performance-based program which includes differentiated staffing and individualized instruction. During that time, a close liaison was required to gain the approval and consent of the district board of education for a teacher education program in the public schools. A Curriculum Council, made up of students, teachers, college faculty, and public school administrators, advises and makes recommendations regarding the management

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[1] For further discussion of the Texas TTT Project and descriptions of Educational Service Centers, Consortium F, etc., see Texas Performance-Based TTT Project. *A Proposal for Educational Personnel Development Operational Grant.*

and content of the program. The school district is responsible for decisions concerning its property and staff while the college determines program, placement, and instructional matters.

Two entities at SMSC influence program. A college-wide group called the Teacher Education Committee (TEC) makes recommendations for the improvement of professional programs and serves in an advisory role to the Division of Education chairman in regard to the Teacher Education Program. A communications link between divisions of the College, TEC has a membership which includes student representatives and representatives from each academic division, the Public Services and Development Division, the Instructional Resource Center, and Student Affairs Division.

During initial development of the program, an Advisory Council of teachers and administrators selected by the chairman of the Division of Education from local school districts made recommendations regarding the general nature of teacher education and the specific role public schools could and should play in preservice programs. Later, this group was replaced by the Policy Council of the Teacher Education Centers. This body includes representatives from participating school districts and the college. It makes overall decisions concerning the participants in the program. Within each district there is a Coordinating Committee whose responsibility it is to plan, develop, and administer the program in that particular district, and to handle concerns as they arise. Its membership includes four teachers, two administrators, and the Teacher Education Center coordinator. The public schools provide facilities, staff, and part of the salary for the center coordinator, while the college provides resource consultants, inservice assistance, and the rest of the coordinator's salary.[1]

WWSC describes the need for the development of policy boards -- Professional Development Councils -- whose membership includes representatives from the college, cooperating school district, and professional associations of the school districts. The boards will approve new programs and review policies and procedures.[2]

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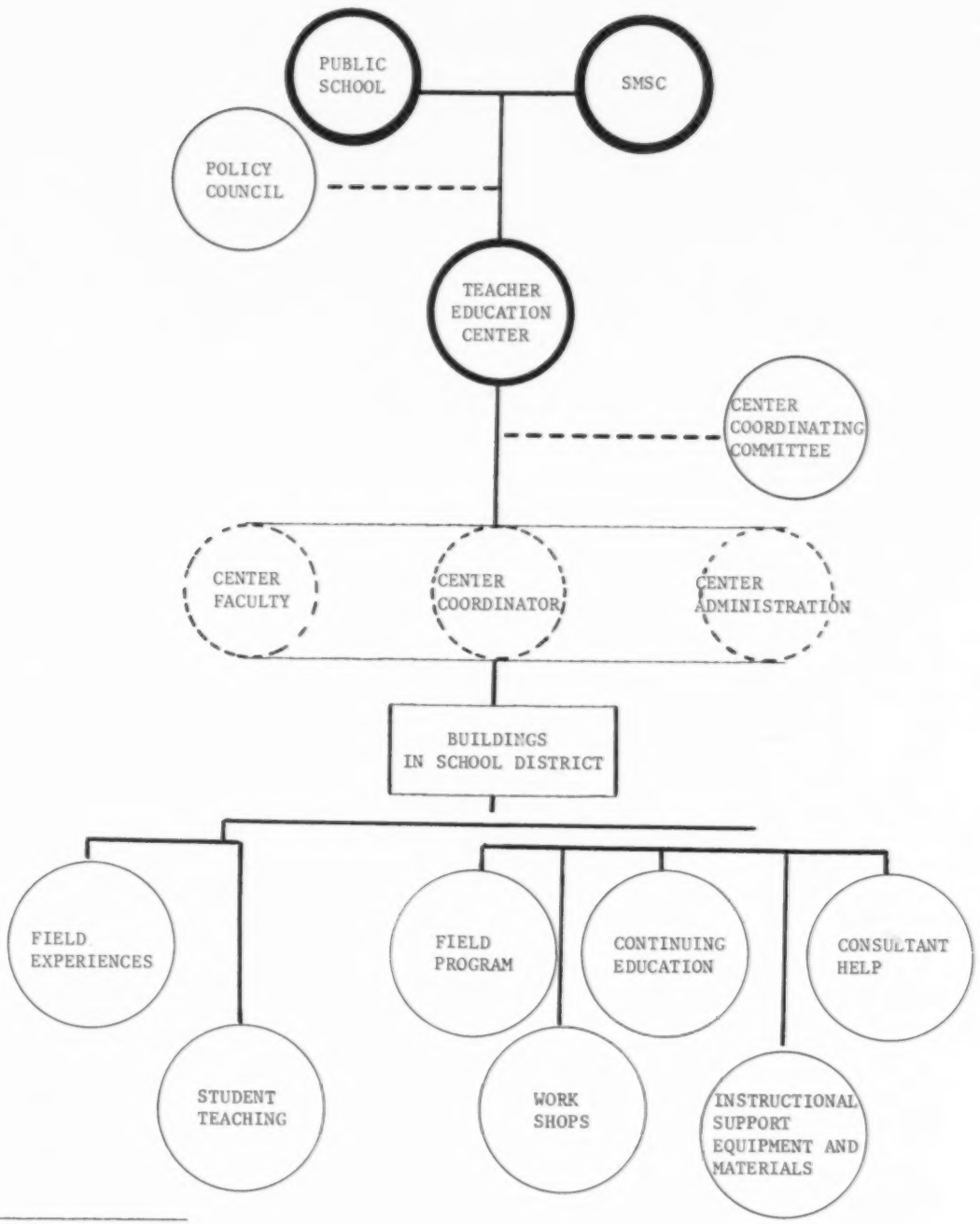
[1]For further discussion see Southwest Minnesota State College, *Report for Accreditation Visit.*

[2]Herbert Hite. "The WWSC Clinical Program for Teacher Education at the Southeast Educational Center, Seattle" (Bellingham, Wash: Western Washington State College, Department of Education, April 6, 1971) mimeographed.

Figure 8. SOUTHWEST MINNESOTA STATE COLLEGE TEACHER EDUCATION CENTER



See p. 26 of the *Report for Accreditation Visit*.

U of Wash has established a coalition of college personnel to recommend priorities for program development and to aid in decision-making matters related to the development and conduct of the program. School district personnel aid in selection of student interns. A Steering Committee for STEP, whose purpose it is to reinforce mutual concerns and to expedite the goals of STEP, is composed of teachers, professional association representatives, and administrators from the school district, and interns, clinical professors from the university and the field coordinator. This group and the field coordinators act as liaison between the two institutions. A similar situation exists in Renton, the other program examined in this study.[1]

Students exercise influence through identification of problems and recommendations for more efficacious operation. Non-division of education personnel may affect the program indirectly and exercise control through such groups as the Teacher Education Committee at SMSC and Faculty Councils which grant approval and support for programs. College administrations exercise control through the latitude they can allow for restructuring traditional course-credit organization, grades, faculty load, and time assignments. The state, through its certification powers, sanctions or restricts PBTE programs.

As can be seen from Table 5 (Appendix), jointly planned and operated field centers exist in only a few programs. Therefore most districts exercise decision making in the form of recommendations and suggestions, rather than in a real partnership with the college. They control the number of students placed in the field, the types of experiences in which they participate, and the particular kind of field organization. Much remains to be done in the development of total professional responsibility for the education of teachers. It becomes quite apparent that for the majority of programs major control and decision making is exercised by the college and its members. The college personnel generally determine organization, selection, instruction, linkage, management, and cybernation, often with the recommendations of the school districts.

Summary

Organizations and individuals exercise control through

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[1]*Orientation Booklet for AACTE Committee on Performance-Based Teacher Education,* (Seattle: University of Washington, College of Education, Nov. 29, 1970).

decision making. The state, the university, and groups within the university exercise indirect or direct control through their power of approval. Individuals such as deans, faculty members, and students can identify problems, recommend solutions, and suggest new approaches.

Public school districts are receivers of the students who require field experiences. Often the public schools act as advisory groups which help determine competencies and objectives of the program, but have little actual power to make decisions. School districts exercise more control and power in situations which have field centers and a center director. Here they share in decision making regarding selection of personnel, director, field associates, students, and facilities.

It is the colleges which, so far, seem to have major decision-making responsibility for the preservice education of teachers.

Organization

The organization system of the programs is considered in terms of three dimensions: time, program, and staff.

Time

Table 2 describes aspects of temporal organization. The "preoperational" period describes the time required to develop the programs. The "initiation" date is the date the present program began. From this can be determined the length of time the program has been operational. "Duration" indicates the usual program entry time and the span of time anticipated for students to achieve competency.

The time of entry into the program, which generally encompasses the professional component only, varies, but usually occurs sometime near the end of the sophomore year or later. In most programs, admission requires that students meet specific standards determined by the quality of the work and recommendations of faculty.

Programs are generally self-paced in that a student may move at his own speed through the program, taking pre-assessment tests to "test-out" if he feels competent; or, after moving through instruction, he may recycle in those areas where he did not demonstrate minimal levels of competence during post-assessment. This provision for working at one's own speed adds the dimension of student responsibility. He must schedule his time and his movement through

the program. In so doing he must take responsibility for his accomplishments and be accountable for achievement and completion.

In most programs, theoretically at least, the student may continue indefinitely until he achieves competency. In reality, those who have difficulty often self-select themselves out of the program. BYU allows one-and-a-half years to complete its program and requires that the first semester be devoted exclusively to the requirements of I-Step although most students complete it in one or two semesters. Thus, in performance-based teacher education programs, achievement becomes a constant while time is a variable, in contrast to traditional programs where time is a constant and achievement varies.

Program

The second dimension is the program organization system. This system determines size, scope, and space necessary for the program. As Table 2 indicates, there is considerable diversity in the scope of the programs under discussion. Some are the total professional programs encompassing all preservice teacher candidates, elementary and secondary, some concentrate on one or another level. Some programs are pilot or experimental programs. A few are graduate preservice teacher preparation programs, others allow graduates or undergraduates to participate in the preservice preparation, while still others are solely undergraduate programs.

The size of the programs can be determined from data in Table 1 (Appendix) in which the number of students and faculty involved in each program is listed. The largest program has 600 students, one pilot program has only twelve students. As can be seen from the two tables, all programs represent recent innovations, the oldest beginning in 1967. Other more recent ones are experimental programs having very few students.

The space necessary for these programs can be quite complex, for they require a wide variety of experiences needing varied settings. Table 4 provides a picture of the space and equipment available in each program.

The types of location also vary. In three of them students take all their training in the communities in which they teach. UU does not require that the students live in the community while SUCB-UUTEP and WWSC do. The students from WWSC live and work in a city a distance of seventy-eight miles from campus. They are in the program for two quarters. SUCB-UUTEP students remain on site for three semesters. The students become familiar with the

children, the community, its problems and needs. Cooperating teachers are required to enroll in inservice preparation prior to the participation in the programs. As they participate, they are expected to continue inservice training to develop their skills as cooperating teachers. The instruction in WWSC is given on-site during the school day and is available to administrators as well as teachers. The teachers are enabled to attend inservice programs during the school day because the state has issued temporary teaching certificates to the students who can legally take responsibility while the teacher is not present.

Instructional support systems are located on site. Materials are shared. WWSC has a materials bank including equipment and module storage. In all programs, when possible, the schools and the colleges share materials such as videotape recorders, books, curriculum materials, slides, and hardware. In SMSC, the State Department of Education gave $200,000 for laboratory and media in public schools, while the State College Board contributed $78,000 for materials.

On campus, programs have specific centers from which to work. Two of the programs (U of Ga and UTEP) have new buildings. SUCB has a newly renovated one. BYU has a small renovated house on the edge of the campus from which to operate. SMSC and WSC are awaiting the completion of their new buildings. LU's faculty and their families helped make the necessary renovations for its program. At present, WSC and SMSC occupy a floor each in their respective library buildings.

The heart of many of these programs is the Instructional Materials Center in which are housed modules, tapes, worksheets, films, hard- and software, readings, and other resource materials. Many of the centers are open long hours so that students can avail themselves of the opportunity to progress through the program at their own speed. There may be individual study carrels with video and audio receivers, slide projectors, as in SMSC, LU, UTEP, BYU.

The programs have TV studios and viewing rooms available, curriculum libraries and facilities for simulation, and small rooms for seminars. Such schools as CSS, U of Wash, and UTEP have demonstration classrooms set up to provide experience and instruction in programs committed to individualization within open environments. All provide work areas and storerooms as well as materials centers and media centers.

At present most of the programs expect to remain at their present size. Physical plant facilities and equipment are generally adequate for current program needs but a need for more

equipment has been identified by many directors. Those who are moving to total program implementation, as is U of Ga, believe that more instructional facilities and mediated material and equipment would be desirable.

Staff

The third element in the organization system is staff. The concern is with staff and the roles required to provide input and supervision for PBTE programs. Table 1 (Appendix) indicates the number of faculty involved in the different programs.

The programs can be divided into two groups. There are those in which the total faculty of the School or College of Education are involved because it is the total program in the school (Figure 9 or Table 2, Appendix) or where the faculty participants are volunteers because the program is a parallel one. This means that there are alternative means to certification. In either case, there has had to be a retraining of the faculty as well as a redefinition of roles.

In many programs the faculty work load is determined traditionally by the number of course credits for which the instructor is responsible, or the number of student contact hours he has. In some PBTE programs no such allotment exists. WSC and SMSC assign faculty responsibilities without regard to these factors. The faculty is accessible to the students throughout the week at scheduled and unscheduled times. FAMU, because it is a pilot experimental program, requires that the faculty participate over and above the traditional work load. No released time has been granted.

The programs which have complex staffing (public school personnel have clearly defined obligations, work as a team with college faculty, have joint appointments, or must have inservice training to participate in these programs) have greater interinstitutional sharing and responsibility than do those whose relationships with public school districts are simple. Examples of complex organization can be seen on the charts in Figure 10. In a simple organization the college faculty initiates, directs, and evaluates programs and performance to a large extent. The public school function as recipients and provide settings and field experiences in return for additional manpower. (Table 5, Appendix).

Students engage in varied staffing experiences. They work in teams in their field assignment, as in TCCU where two students work together in a classroom. In others -- as at the U of Ga -- the

Figure 9. STAFFING ORGANIZATION

College

Total College of Education	Volunteer College of Education
LU	FAMU (interdepartmental)
SMSC	U of Ga
CSS	SUCB
TCCU (preservice program)	UTEP
WSC	U of Wash
	BYU
	UU
	WWSC

Field

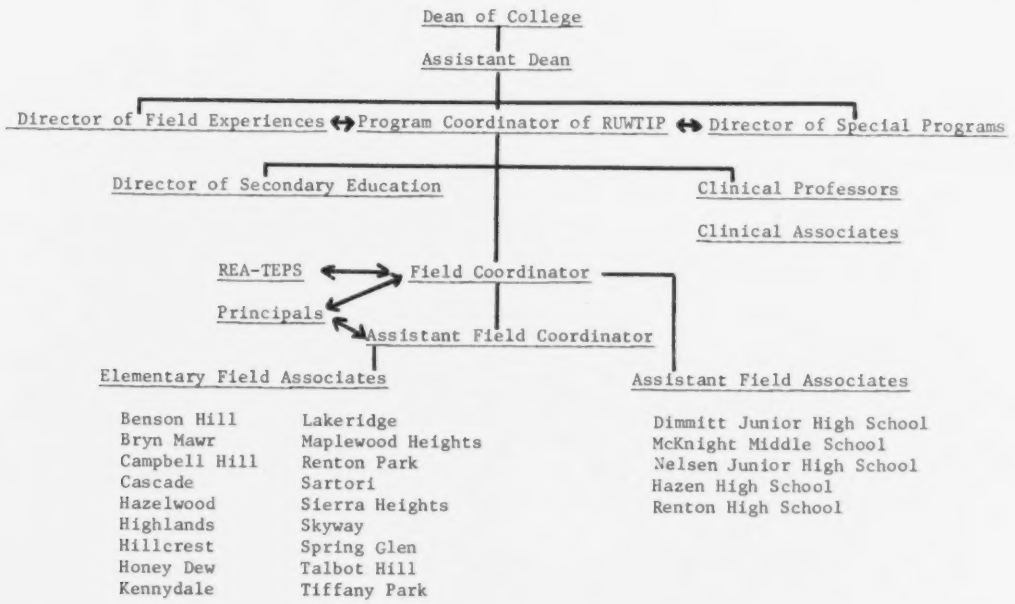
Public Schools as receivers	Public Schools as partners (Joint appointments)
LU	SMSC - Teacher Education Center's coordinator, joint appointment and salary
FAMU	SUCB
TCCU	a. Teacher Corps
CSS	b. UUTEP
BYU	UTEP
WSC	U of Wash
	WWSC
	U of Ga (faculty member assigned to school)

student participates in a differentiated staffing experience in which he moves from teacher aide to teacher assistant to student teacher or intern. Personnel utilization is illustrated in Table 6, Appendix. Using FAMU as an example, the college faculty works as a team as described earlier in this section. The site of the intensive field experience or student teaching, the high school, has a differentiated staff, in which different public school personnel perform specified roles. The students also engage in this differentiation by serving in varied roles throughout their

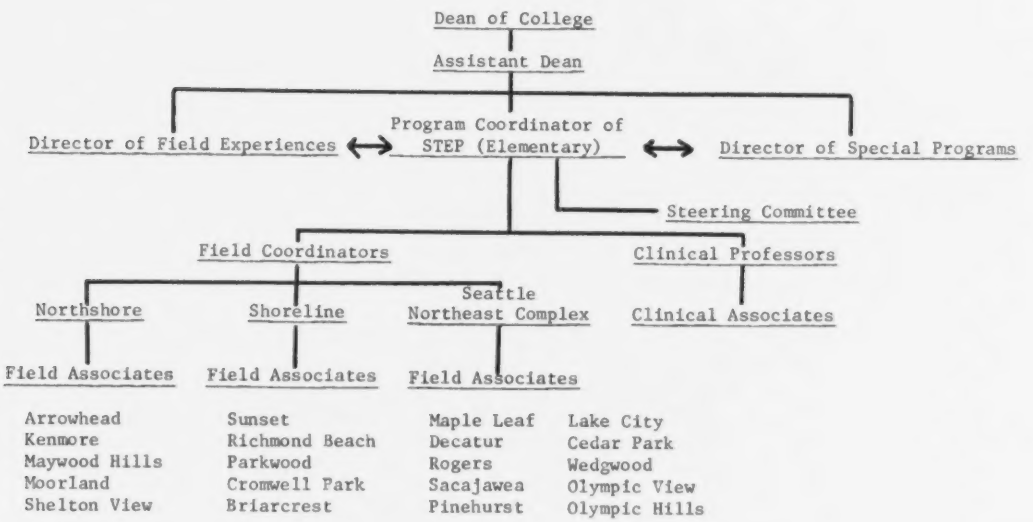
Figure 10. ORGANIZATION CHART: RENTON, STEP

UNIVERSITY OF WASHINGTON*
COLLEGE OF EDUCATION

RENTON-TEACHER INTERN PROGRAM
ORGANIZATION CHART



SPECIAL TEACHER EDUCATION PROGRAM (Elementary)
ORGANIZATIONAL CHART



*_Orientation Booklet for the visit of the AACTE Committee on PBTE_ at the University of Washington.

practicum experience. At UU, the college faculty work in a team, and in the public schools, the students and the public school teachers team teach. The arrows in Table 6 indicate that the relationship is intergroup rather than being self-contained with one group. Staffing and relationships change and modify as the programs evolve and develop.

Summary

The temporal organization determines student entry into the programs, which occurs during or after sophomore year, at which time the student proceeds to move through the modularized program at his own speed within certain constraints.

The programs are total, parallel, or experimental encompassing elementary, secondary, or both levels, and are all preservice. Three of them are field-situated. The operations center or instructional materials center is the heart of the program through which all things operate. With the exception of the pilot programs and the two which are making the transition to total programs, the rest expect to remain about their present size.

The staff organization requires new roles for instructors as counselor, advisor, and facilitator. A number of programs utilize graduate students as partners or members of differentiated staff. New skills are required in group work, team planning, systems design, identifying and writing program and behavioral objectives, writing modules, and working with mediated materials. Retraining through workshops, visits, and consultation is essential. The work load and scheduling tend to become problems because determination of work load is difficult and scheduling requires more of the time and availability of the instructor than traditional programs.

College students take on new and different responsibilities such as contracting for learning objectives, organizing learning time, and regulating their own schedules. They are expected to work in team situations and differentiated staffing arrangements.

Linkage

This is the system which carries on the connecting function among the organizations and individuals in the environment. A major aspect of the linkage system which moves from interaction of organizations to individual-individual interaction, or individual-organization interaction is the element of human relations.

The programs have developed a field component running the gamut from traditional observation and student teaching to completely field-based programs such as those at WWSC, SUCB-UUTEP, and UU.

There is general cooperation in these districts. In fact, Duluth and Southeast Seattle requested the participation of the colleges now involved. SMSC planned and worked with the surrounding school districts from the inception of the college so that all had had some influence in shaping the goals of the teacher education program. The five districts directly involved in the program have a Policy Committee and a Coordinating Committee which participate in decision making. SUCB-UUTEP has a similar relationship with its partner, the school district of Lackawanna. The administrators and teachers were involved in one-and-one-half years of planning before the operation of the program commenced. Inservice courses were provided and continue to operate to familiarize personnel with the strategies of operation of such programs. Both WWSC and U of Wash also have well-planned collaborative efforts which are being developed into more extensive consortia.

As noted in Table 1 (Appendix), all faculty involved in these programs are members of the Education Faculty with the exception of FAMU. However, as time passes and others become familiar with the programs, interest is stimulated in other parts of the University. New collaborative relationships are being developed between academic faculty and education faculty. Educationists give workshops and lead seminars to familiarize other faculty members with PBTE. Such diverse groups as home economics, physical education, music, English, and philosophy have evinced interest and are moving in this direction.[1] In other institutions, mathematics, physics, industrial education, and business education are examining the programs. At the U of Ga, agriculture, pharmacy, and medicine are exploring performance-based education.[2]

The programs must concern themselves with the individual and his relationship to others in his environment. The awareness of self and one's relation with others, the development and growth in self and interpersonal relations all help to establish linkages to

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[1] Philip Richards, CSS, telephone interview, August 26, 1971.

[2] Charles F. Johnson and Gilbert Shearron, personal interview at U of Ga, October 6, 1971.

the environment and can enhance transactions therein. Thus, PBTE programs provide for a multifaceted approach to human relations.

Interaction activities are provided to help the individual grow in relation to others. The UTEP program includes a clinical psychologist who provides counseling. Some programs assign students to specific advisors for the program engagement. LU, SMSC, and TCCU have provided this continuity of relationship. SMSC and BYU assign the student not only to an advisor but to an advisory group with whom he will proceed through the program so that a long, close, and intimate relationship can develop among peers. FAMU has this built in by the nature of the size of the program. Provisions for interacting in teams are made by UTEP and SUCB-TC which follow Teacher Corps procedure and develop teams made up of a team leader, classroom teacher, and teacher candidates. A typical UTEP Teacher Corps team is made up of one team leader, two regular teachers, and seven interns working with 120 children in an open classroom setting.[1] Other programs assign teacher candidates to their practicum or student teaching experiences in teams, as TCCU and BYU. The teamed students can provide assistance, critiques, and support to one another as they progress through this aspect of the program.

Most of the programs make provision for group interaction through seminars. Some seminars are programmed and required. Others are optional and are organized and scheduled at the request of the students who sign up for them, when the need arises as in WSC, or as they are interested as in SMSC. In any case, the seminars provide needed interaction among the students and provide for the discussion and analysis of cogent problems and experiences.

In many of these programs the traditional class organized three times weekly for an hour has been terminated. Instead, students work at their own pace or in assigned blocks of time to accomplish the objectives of the program and acquire the required competencies. In so doing, much of the work is individualized, and unless it is built into the instructional package, little interpersonal activity may occur. Therefore, seminars and group activities are essential.

Most programs incorporate some modules, units, or blocks to develop humaneness and interpersonal relations. BYU has developed a unit of objectives dealing with values and another with reality therapy. U of Ga has developed an instructional phase using a

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[1]Oscar Jarvis, UTEP, telephone interview, August 9, 1971.

model of a helping relationship.[1] UTEP has organized its program on three basic cores, one of which is called the Psycho-Personal core and stresses growth in self-awareness and interaction. WSC contracted with the Thiokol Corporation to develop its Human Relations Laboratory program which includes sensitivity training and is available to other institutions for purchase. LU and SUCB-TC require their students to take part in sensitivity training to develop awareness of self in interpersonal relations.

Most of the programs concentrate on the development of awareness and growth among the students. However, the U of Wash in its STEP program emphasizes interaction seminars in the school districts for public school administrators, field associates (teachers), and clinical professors (college faculty) during which attempts are made to find solutions to problems arising from the program, and to identify and define roles more clearly.

Two programs provide orientation sessions. The participants, college faculty and students, remove themselves from campus and live together for a few days in order to know each other better. FAMU goes on a retreat which is brief, but permits exploration and interaction among the program participants. BYU goes on a three-day camping trip in the mountains surrounding the campus. Participants take with them the barest essentials. Time is spent in cooperative, productive work in order to provide the basic essentials of survival -- food and shelter. Through this intensive experience the program members learn much about themselves and their interpersonal relations.

Provisions for personalization are made through assignment of an advisor, as in TC, LU, and SMSC. Opportunities for personal choice and contact with a faculty member are possible in all programs through the availability of instructors for clarification and assistance and facilitation on a dyadic basis. Some programs make provision for grade or module contracts which are negotiable. LU allows the student to plan with his advisor his program based on his specific needs. A number of programs encourage decision making on the part of the student by allowing him to design his own module if those available do not seem appropriate to his needs.

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[1]Robert R. Carkhuff, "Helping and Human Relations: A Brief Guide for Training Lay Helpers." (Springfield, Mass.: American International College, Center for Human Relations and Community Affairs, n.d.), (Mimeographed) 11 p.

Figure 11. STUDENT-FACULTY NEGOTIATION OF GRADES AND OBJECTIVES

Grades	*Objectives*
CSS	SMSC
SUCB-TC	BYU
SMSC	LU
BYU	UU

The programs attempt to develop a cross-cultural awareness. This occurs through input of multiracial, multiclass, and multicultural experiences. SUCB-UUTEP and WWSC require that student participants live on-site so that they are totally familiar with the community and its problems. Both SUCB programs and the UTEP require student involvement in community/work agencies so that they can become familiar with the community, its people, their problems, and the resources available.

Other programs view their obligation to provide diversity of experience and, therefore, attempt to enlarge students' awareness. The U of Ga provides students with rural and urban field experiences. WSC sends students to schools with Black and Mexican-American pupils. SUCB, TCCU, and UTEP provide urban experience. UTEP's program is committed to the improvement of teacher training for Mexican-American pupils so students are assigned to schools which have large Mexican-American populations.

Other provisions for cross-cultural awareness are made through course work as at CSS and SUCB and/or instructional cores such as the UTEP's sociocultural core which provides modularized instruction about the cultural heritage and history of the Mexican-American.

Summary

Linkage is the connecting system which relates individuals and organizations to one another. Through interaction and dissemination other college departments are becoming interested in PBTE programs and contemplating movement in this direction. Human relations is an important aspect of this system. Various provisions are made -- among them, assignment of the student to a stable group or team, development of self- and cross-cultural awareness through activities, modules, and units to develop humaneness and other attributes of the affective domain.

Figure 12. LINKAGE EXPERIENCE PROVISIONS -- HUMAN RELATIONS

Cross-Cultural (multiracial, class, cultural)

1. Interinstitutional seminars
2. School experiences
3. On-site living
4. Community involvement
5. Course work
6. Blocks, units, modules

Human Relations Training

1. Off-campus orientation experiences
2. Interaction seminars
3. Human relations training laboratory
4. Programs and models

Interaction Activities

1. Counseling
2. Advisor
3. Advisory group
4. Teams
5. Seminars

Individualization

1. Modularized instruction - self-select
2. Negotiation and contract
3. Assignment of advisor
4. Developing own instructional modules

Instructional Aspects

1. Group dynamics
2. Sensitivity
3. Role playing
4. Simulation

Instruction

> ...A "teacher education program" refers to the curriculum, the teaching, the learning, and the supporting resources for the teaching and learning process.[1]

The professional studies component "...covers all requirements that are justified by the work of the specific profession of teaching."[2]

Performance-based teacher education programs generally commence during or after the sophomore year, usually after or near the completion of the general studies component. This analysis will concentrate on three dimensions of the instruction system: content, strategies, and staff.

Content

Programs are concerned with the professional studies component which encompasses:

a) concepts of human development and learning

b) content for the teaching specialty

c) designs for teaching and learning

d) the analytic study of teaching, and

e) demonstration and evaluation of teaching competencies.

The content is determined by the extent and inclusion of the subject area, content disciplines, and clinical studies. All the programs contain components which are found in "b" through "e." Some programs require concepts of human development and learning ("a") to be taken in the traditional program sequence. This then is used as an entry requirement into the PBTE program.

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[1] AACTE. *Recommended Standards for Teacher Education: The Accreditation of Basic and Advanced Preparation Programs for Professional School Personnel* (Wash., D.C.: AACTE, 1970), p. 3.

[2] Ibid, p. 4.

In developing the content for the instructional system, two approaches are taken. They ca be classified as 1) preplanning approach and 2) developmental approach, realizing, of course, that neither is discrete. Using the preplanning approach, programs attempt to identify competencies teachers need and attempt to develop input and instructional strategies to achieve them. UTEP organizes its program into three cores: Professional-Technical, Psycho-Personal, and Socio-Cultural. UU attempts to encompass all professional experiences for secondary education without using traditional professional courses, but rather through the learner's senses while he engages in projects which lead to outcomes the learner desires.[1]

Other institutions take a developmental approach. They break down the usual content courses, such as methods, into objectives and modules and gradually introduce the modularized instruction through this breakdown. Generally, the programs include the content of the traditional methods courses, as well as the content required for teaching and learning designs, and the analytic study of teaching. Materials are not elaborately planned before the operation of the program in the developmental phase because the identification of competencies and the development of supporting resources is a huge task which requires inordinate amounts of time not scheduled for many of the faculty developing such programs.

SMSC had two years to prepare the program before operationalizing in 1969. UU and WSC had released time for the development of plans and materials. TCCU and U of Ga had both been funded models by the USOE so had had some time to plan and to think through the development of their programs. As can be noted in Table 2 (Appendix) the preoperational period varied from no time to three years.

The identification of competencies was done in various ways. The faculty of LU had brainstorming sessions to determine terminal competencies. Input, experiences, and resources necessary to achieve such competencies then were deduced. This done, the faculty examined the materials for feasibility.

Some institutions developed their terminal competencies collaboratively with the personnel from school districts, teacher organizations, based on research sources (SMSC, WWSC, CSS). FAMU was

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[1] Martin O. Juel, "Why-What-How," (report of observations of Life Internship Project at University of Utah sent to AACTE, April, 1971) pp. 1-2.

assisted by state consultants and research done by others in the area of teacher competencies.

BYU developed materials and organized for instruction concurrently with the identification of objectives. WWSC, satisfied with its objectives, believed it needed more and better instructional packages. In order to acquire them, graduate students were paid to develop and field-test them. The results were useful as components which could be combined into larger packages.

Strategies

The strategies of instruction are another element and are determined by task analysis and task specifications. Through this process are established behaviors, treatments, and assessment considered necessary for the internalization and retention of content.

The attempt to break down the content areas into modules of instruction which will ultimately eliminate course structure is characteristic of these programs (Table 3, Appendix).

Activities carried on in these programs are quite similar. All have some kind of instructional package which requires decision making, self-actualization, and individualized work on the part of the student. Variations are found in the quantity of packages available, the way they are sequenced, and the number and type required, i.e. proficiency modules which are combined into larger units called clusters. This arrangement is similar for SUCB, TCCU, and BYU. WSC's Wilkits are developed around a number of objectives which are combined into one Wilkit. UTEP's program is divided into three cores into which are programmed instructional modules. The number of the materials vary as do the expected outcomes. Most are in terms of teacher performance, although some attempt to specify outcomes in terms of pupil activity.

A SUGGESTED MODULE FORMAT[1]

1. Objectives (and rationale).
2. Prerequisites.

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[1]Robert L. Arends, John A. Masla, and Wilford A. Weber. *Handbook for the Development of Instructional Modules in Competency-Based Teacher Education Programs* (Buffalo and Syracuse, New York: The Center for the Study of Teaching, 1971) p.6.2.

3. Preassessment procedures.
4. Instructional activities.
5. Postassessment procedures.
6. Remediation procedures.

The objectives may be of many types. Often the objectives are enabling[1] ones that specify one competency and are specific. It is intended that they will enable the student to achieve the terminal objectives.[2] These objectives can be of types cited below.

The objectives are in a continuum from narrow enabling ones through intermediate to broad objectives, which are quite open to interpretation.

If one considers Turner's levels of competency, most of the objectives of the programs range from levels six to three, where the concentration is the teacher's ability to perform certain acts successfully in the classroom.[3] Levels one and two discuss competency based on pupil outcome which most program directors have indicated as too difficult to assess. In spite of this, UU, WWSC, and U of Wash attempt to define theirs in terms of pupil outcomes.

Sample Objectives of Various Types

...examples of various types of objectives are presented here.

Cognitive Objective. The student will be able to write, in a class setting without the use

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[1] "Enabling objectives are the necessary student learning tasks that bridge the gap between existing student ability and each derived terminal objective. (p. vi) these...consist of component actions, knowledges, skills and so forth, the student must learn if he is to attain terminal objectives." (p. 14) Harry L. Ammerman and William H. Melching. *The Derivation, Analysis and Classification of Instructional Objectives* (Washington, D.C.: George Washington University, Human Resources Research Office, May, 1966), p. 14.

[2] Ibid, p. vi, "...are representations of the ultimate performance capabilities sought by the instructional program."

[3] *The Power of Competency-Based Teacher Education*, pp. 35-37.

of aids, a definition of the term operant conditioning which is adjudged accurate. (Knowledge criteria are applied in assessing competence.)

Affective Objective. The student will demonstrate his concern for persons in the lower socioeconomic groups by voluntarily spending at least two hours per week working in a social service agency. (Because of the nature of the affective domain, measurement criteria in this area are not usually discussed in advance with the student; should they be, the objective might be thought of as an expressive objective; performance criteria are used.)

Psychomotor Objective. The student will demonstrate his competency by writing ten words on the chalkboard in such a manner that three impartial judges agree that a minimal level of performance has been accomplished. (Performance criteria are used to determine mastery.)

Demonstrative Objective. The student will demonstrate one competency in the indirect teaching approach by the following: given a subject and one day to prepare a fifteen-minute lesson, the student will present said lesson in such a manner as to manifest indirect teaching behaviors as defined in the Flanders interaction analysis system. (The objective is the demonstration of teaching behaviors; performance criteria are applied in assessing mastery.)

Consequential Objective. The student will demonstrate one competency in teaching mathematics by the following: given three eight-year-old pupils who have not mastered division by one digit, the student will successfully teach said pupils division by one digit in a period of not less than three weeks; success is described as ninety-percent-accuracy upon the part of two of the three pupils. (The objective is the demonstration of changes in pupil behavior; product criteria are applied in assessing competence.)

Expressive Objective. The student will visit the home of each of his pupils at least once during the school year.[1]

Through the organization and the modules an attempt is made to promote individualization. The student may take preassessment tests to eliminate modules in which he has strength. He may proceed through required modules at his own pace, choosing among alternative strategies provided in the modules. In some situations, the sequence in which the modules are engaged is determined; other programs allow the student, in consultation with his advisor or instructor, to select and negotiate modules which he believes necessary for his growth (SMSC, BYU).

In order to attain the objectives of the program and acquire the necessary competencies, varied activities are indicated. The programs generally have a graduated conceptualization, that is, practice exercises leading to practice teaching such as simulation, peer teaching, tutoring, microteaching, and teaching analysis.

The microteaching uses two groups, peers and children; sometimes on campus, sometimes in the field. Self-analysis, counselor analysis, and peer analysis of video and audio tapes are encouraged. Some programs use Flanders Interaction Analysis, while TCCU uses one it has developed. WSC is presently developing a multidimensional observational tool. Whatever the source, most of the programs stress the self-analysis of teaching through the use of some analytic scheme.

Students are expected to develop competency in writing objectives, usually behavioral, in many of the programs.[2] Along with the development of behavioral objectives, students are often encouraged to develop instructional modules for their own pupils. Because many of the programs desire to train teachers to work in individualized programs (LU, CSS, UTEP, BYU, WSC, WWSC, U of Wash),

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[1]Arends, Masla, and Weber, *Handbook for the Development of Instructional Modules in Competency-Based Teacher Education Programs*, pp. 4.6-4.8.

[2]Robert F. Mager, *Preparing Instructional Objectives* (Palo Alto, California: Fearon Press, 1962) is generally the source.

they attempt to set up situations similar to those in which the students will work. To provide training experiences upon which the students can model themselves, the programs attempt to be models as do the instructors in the program. Stress is placed on teaching awareness, objectives, modules, independent activity, small groups, human relations, and mediated materials. Mediated materials are important parts of most programs.[1] All include some form of practicum experience, either as student teacher or intern, prior to certification.

Because of the modularization and the individualized work, the accusation that the programs are atomistic has been made. However, the designers of the program have made attempts to avoid this. Instructional packages are developed which are sequential in nature. That is, they require increased competency by designing indicators which force the integration of many of the narrow objectives as the student becomes more knowledgeable and more competent.

In order to provide group activities as well as individualized ones, seminars are used to integrate field experiences and modular experiences. They provide opportunity for the analysis, integration, and discussion of material.

The assumption is made that student teaching practicums, or internships, are culminatory experiences which provide an opportunity to pull together and use the learnings developed throughout the programs. The students at TCCU plan and develop during the year a curriculum for a summer school for neighborhood children. During the summer the school is made operational and the students have total responsibility for the management of the school and its curriculum. Thus, there are ways in which attempts are made to keep the PBTE program holistic and prevent fragmentation.

Staff

The staff in PBTE programs requires considerable knowledge and sophistication in areas previously unfamiliar. The role of teacher in these programs takes on new dimensions. A working knowledge of mediated materials is necessary as is familiarity with systems analysis and design, task analysis, determining and writing objectives, and developing instructional material. No longer is the

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[1]Bruce Joyce et al. *Materials for Modules: A Classification of Competency-Oriented Tools for Teacher Education*, Project No. 420271 (New York: Teachers College, Columbia University, June, 1971). This is a source book for these materials.

role one of lecturer, but rather that of instructional manager or learning facilitator. The work is done on a one-to-one or small group basis, with the faculty member functioning as manager, facilitator, advisor, and counselor. The time required is greater.

The college staff has had to move into a role more familiar to counseling in which the instructor works with individual students or in small groups as in seminars. The large lecture class or recitation class occurs, but infrequently. Most student contact is much more intimate, based on needs identified by the instructor and/or the student. In many programs faculty members act as advisors responsible for assisting the student to plan and follow through on his negotiated instructional program.

Faculty members have had to develop group work skills, for not only do they work in small groups with their students, but many of the programs are so designed that team work among the faculty is a necessity. SMSC hired faculty who were willing, and had experience in, using team teaching and interdisciplinary experiences.[1] Because the faculty involved at FAMU is small and interdepartmental, with subject specialists from liberal arts departments working with the director, an educationalist, it is essential that the staff work and plan together.

Many of the institutions include graduate students in their instructional staffs. In this case, the graduate students work in teams with the professional faculty sharing teaching and advisement loads and research responsibilities. BYU has an interesting team arrangement: faculty work so closely together that if a member needs to be relieved to improve or develop his skills, others will and can "cover" for him. SMSC requires that each faculty member examine and pass upon all instructional material as it is prepared, even if it is not in the area of the instructor's expertise so that he is familiar with the "ComPacs" available and can assist a colleague if necessary.

The consensus is that staff retraining is a necessary aspect in PBTE programs. Workshops, released time, visits, consultants, and work with faculty have been sources for retraining. Emphasis

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[1]The U. of Nebraska operates its seminars so that a person with expertise in an area such as educational psychology will team with a content specialist to provide guidance and input to the future secondary teachers. The School was visited too late to be included in the study.

is given to awareness and development of program objectives, behavioral objectives, modules, strengths in working with mediated materials, and an understanding and ability to work within a systems approach.

The prevailing view is that participating in the process of development and implementation of such programs is invaluable and an almost essential training component.

To provide continuity and personalization, some programs organize students into groups that work together throughout the program and develop a closeness under the supervision of a faculty member who advises, counsels, and leads the group (SMSC, BYU).

In some programs there are clinical professors who are responsible for instruction and assessment of students in the field (U of Wash, WWSC). They may be college or public school personnel. The responsibilities of cooperating teachers depend upon the program model and the teachers' preparation. Their obligations may range from establishment of a classroom environment supportive of the needed student experiences to instruction and assessment of the student's performance.

Summary

The content of instruction deals with the professional component which includes content for the teaching specialty, designs for teaching and learning, the analytic study of teaching, and the demonstration and evaluation of teaching competencies. Concepts of human development and learning are sometimes included. The content development takes two approaches: 1) a preplanning approach where competencies and instructional support materials needed in order to restructure programs and provide input are planned and developed beforehand, or 2) a developmental approach in which traditional content courses are broken down into learning packages and thus programs are gradually modularized and new instructional procedures develop slowly. In most cases, materials are not elaborately planned prior to operation since that is a formidable task requiring much time and energy.

Attempts are made to eliminate course structure and individualize instruction through instructional packages called modules or clusters. There are variations in quantity, quality, and scope of the packages, and of their objectives. There are varied activities and alternate routes to demonstrate performance which include microteaching, simulation, paper and pencil work, and practicums.

Competent instructional staff requires reorientation and sophistication in new areas such as systems analysis, working with mediated materials, developing instructional materials, and working in small groups. The process of development and implementation is an invaluable training component.

Management

PBTE programs require planned management systems for economy and efficiency. Management allocates, controls, and accounts for all components. Management information concerning the program, its operations, and the progress of students, faculty, and the program itself is essential for orientation, dissemination, and research purposes among the educational community.

The management has responsibility for the scheduling and assignment of students, faculty, instructional material, and physical plant capacity. Individual students' progress must be tracked. Records must be kept of such things as modules contracted for and completed, competencies acquired, length of time required to acquire competency, level of attainment, and frequency of recycling. Each faculty member's assignment, time schedule, and student-work-hour load needs to be planned and recorded. The program management system must account for such administrative details as grading, time organization (semester, quarter, other), course-credit, and certification requirements. The system should track student movement through the program, the instructional materials in use and those which have been used, the frequency of use, the competencies acquired through the program, and other data about the program which can be retrieved for examination and research.

Computers are being used by some schools to record student progress. In others, information is collected in conventional file systems. Most program directors agree that the computer could play a major role in the management function if sufficient funds were available.

Many of the programs deal with administrative details of program management in much the same way. They operate under similar constraints imposed by the requirements of the institution and the state. The following areas are directly affected: certification requirements, course-credit, grading, and time organization.

The state education departments dictate requirements for certification. Programs must be organized and managed to meet these requirements. It can be seen in Table 2 (Appendix) that some programs operate under program approval, others under course-credit

approval and still others under special arrangements. Courses and their allotted credits are prescribed by the state for certification.

Another limitation placed on the operation and management of the PBTE program is the uniformity of record-keeping required by the institution. Therefore, although many of the programs have modularized instruction and utilize blocks of time rather than the traditional hour, they are constrained to arrange them within a collegewide pattern. Therefore, course numbers, titles, and credits are commonly used on transcripts and in bulletins although, in practice, the programs are eliminating such barriers. This is accomplished in several ways. Programs such as those of BYU, UU, and WWSC require the student to commit himself solely to the program, taking no other courses for at least one part of the time he is enrolled in the program. LU moves students through the program through critical path-scheduling and modularization. As students' progress is recorded, a computer automatically records titles and grades as they move through the twenty-six check points of the program. Others require students to register for courses scheduled for large blocks of time. Within these blocks there is the freedom to permit self-pacing and modularization.

Other conventional restraints include grading and time (in terms of semesters and quarters). These requirements cause time to be a constant and competency a variable, whereas the PBTE program attempts to allow the student to move at his own speed, in order to achieve competence. This makes time a variable and competence a constant. This conflict causes problems for the management system. A solution commonly used is to give the student an "Incomplete" at the end of the semester or quarter if he has not demonstrated the performance required under the course description. When competence is demonstrated, grades are given as described in Table 2 (Appendix). General agreement is that the most appropriate way to grade would be P-F or A-Inc; however, the problem of conformity to college regulations and transcript requirements sometimes prevents this.

The numbers of students and faculty involved in the programs vary widely. Among the five largest, three are now total programs encompassing both elementary and secondary teacher preparation programs: WSC, SMSC and CSS. LU has begun the transition as of September 1971, as has U of Ga. However, the latter is making the transition in the elementary education area only.

The size and commitment of the program seems to dictate the type of record-keeping system in operation. The three total programs have operations centers whose staffs maintain the program. They are responsible for --

- Cataloging, maintenance, and allocation of instructional material
- Scheduling of student-faculty conferences, seminars, and lectures
- Scheduling of assessment and microteaching sessions
- Maintenance of student progress records, including field assignments, objectives completed, etc.
- Administration of objective tests for pre- and post-assessment.

This management system is formal and centralized.

Figure 13. STUDENTS AND FACULTY IN PBTE PROGRAMS

Institution	*No. of Students*	*No. of Faculty*
1. WSC	600	15
2. U of Ga	450-500	40-50
3. SMSC	450	14
4. CSS	350	10
5. LU	150	27
6. BYU	113	4-5
7. WWSC	110	3
8. U of Wash		
STEP	76	7
Renton	47	
9. SUCB		
UUTEP	40	9
TC	37	12
10. TCCU	32	3
11. UTEP	28	5
12. FAMU	11	6
13. UU	12	2

As LU moves to total PBTE program, it has begun to use a computer to record student progress. As the student completes the IPIM's (Table 3, Appendix) the results are computerized. The computer automatically prints out course, credit, and grade upon completion of certain modules. The computer tracks and places each student. BYU and SMSC (as of September '71) are using computers for recording objectives the student has contracted to complete and those he has achieved. The print-out is available within one day.

SUCB has numbered its modules so that if computerization occurs, material will be easily cataloged. The consensus among program directors is that computer tracking would be desirable but at present it is too expensive.

Among the other programs, management is informal and decentralized. Each faculty member keeps his own records of student achievement. Most of the programs are small, and tracking the students and their progress is not a major problem.

Faculty assignment is determined in various ways. Total programs expect faculty to be responsible for planning, development, and operation of instruction in areas of specific expertise. However, because of the nature of the programs, it is necessary to work in faculty teams to accomplish the goals of the program. The time required is more extensive than in a traditional program. Sometimes the faculty member is assigned responsibility as advisor to a group of students. In that case, he must allocate time for instruction, time for advisee group meetings, time for individual consultation and advisement, and he must know what the student is doing.

Faculty assignments in traditional programs are based on contact hours. Many assignments in PBTE are assigned in the same fashion. However, since the program operates so variously, the problem of determining contact hours needs to be clarified. An examination of the table on page 106 will indicate the apportionment problem with which the programs are confronted.

Although the beginning of this section laid out target specifications for management systems, it has not been possible to describe them fully in the terms initially proposed. In most cases management procedures have evolved as programs developed. Less time was given to planning of management than to other aspects of the programs. The management system of PBTE programs are in need of greater clarification and specification.

Summary

Management is the coordination of the interdependent parts of the total system. It is responsible for scheduling, assigning, and tracking faculty, students, instructional materials, and physical plant capacity. It must attend to such administrative details as grading, time organization, course-credit accommodation, and certification requirements. This can be done through computers, the use of which is limited in programs under examination, or a file system, which can be formal and centralized and work through an

operations center, or an informal, decentralized one where faculty members track their own students. Management procedures seem to evolve as programs develop. It appears that less time has been devoted to this system than to others. The system is in need of further clarification and specification.

Cybernation

The cybernation system provides the data which are used for institutional research and student and program evaluation. It provides for monitoring of the system through continuous evaluation and analysis. Through the monitoring function, adjustments can be made to optimize the effectiveness and economy of the system as well as to improve the performance of instructor and learner. A key question is the determination of "...how closely the output of the system satisfies the purpose for which it exists."[1]

Examination of the conceptualization of the program and the objectives of the instructional modules is essential to determine the congruence of the output to the purpose. But many specifics are required to assess the accomplishments of the PBTE program. Data about the program, student progress, and product output must be collected and analyzed.

Program data should describe time and space requirements such as classification of instructional time periods, sufficient and appropriate space facilities, the adequacy and effectiveness of instructional materials including modules, protocol, and training materials. The adequacy and effectiveness of instructional strategies should be examined. The effectiveness of other subsystems should be monitored as well.

Feedback should be a means of acquiring information about the students in the program. The expectancy and achievement of student performance needs examination; identification of students experiencing difficulties should be possible; information on student selection and retention should be available.

A program's effectiveness can be determined by the performance of the student as he moves along the professional continuum into his own classroom. Therefore, graduate follow-up is another data source to examine for information about PBTE programs.

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[1] Banathy. *Instructional Systems*, p. 13.

In the cases investigated, program feedback is obtained in several ways, all rather informal. Comments, observations, and reactions to the program are gathered from college personnel, students, and public school personnel. Most of this feedback is subjective and impressionistic although some schools make an attempt to obtain more formal data. SMSC administers a written form for student assessment of his or her experiences each quarter and encourages any suggestions for change. CSS administers attitude opinionnaires during the sophomore year and again in the senior year during student teaching. SUCB administers questionnaires three times during the year, and UU has pre-and postattitudinal assessment forms. Comments and responses are analyzed, and adjustments in program are attempted when deemed appropriate.

Some form of module or cluster exists in each of the programs, and in many it is a substantial part of the instructional subsystem. It is essential to determine the appropriateness of the objectives, the learning activities, and the package in terms of student performance. Some programs require students to fill out forms after completion of each module, reacting to its appropriateness and usefulness and requesting suggestions for modifications (SMSC, WSC, BYU). Other programs determine effectiveness of modules through the ease with which students accomplish the competency (LU, U of Wash, WWSC, SUCB). SUCB has developed a Module Feedback Instrument which can be used by instructors for immediate feedback.[1]

WSC is developing an assessment system to fit its objectives. Students and faculty will be able to evaluate their performance which will provide input for program evaluation and, thus, ultimately modify the Wilkits which are the vehicles of instruction.

Cybernation should provide information regarding student progress as well as intelligence about the program itself. All programs provide this through observation and paper-and-pencil experiences. Some programs, in addition, include interview and simulation and microlab experiences. These assessments are in terms of objectives specified by the modules or instructional units with which the students are engaged. Indicators are given for determination, and students generally receive immediate feedback in terms of module and cluster achievement. In many cases the final assessment,

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[1]John Masla, *Competency-Based Education Development Project: Final Report*, Project No. 0-8-73, 2 volumes, Buffalo, N.Y.: State University College, August 31, 1971. A copy of this instrument can be found in Appendix V, Vol. II.

however, appears to be rather subjective and determined by the assessor. Nevertheless, students in PBTE programs are aware of their standing in relation to program component expectations.

In all programs assessment is done by faculty as well as self. Additional assessments in programs are made by peers, cooperating teachers, and faculty teams. The performance may be an actual demonstration of teaching technique as in micro- or classroom teaching, or it might be a test of cognitive knowledge requiring written responses. It must be emphasized that performance does not necessarily mean actual teaching. UU has developed an analytic record of teaching and instruments through which it measures pre- and postassessment of concept attainment.

The hiring practices of school systems also provide feedback about both program and student performance. If a district specifically requests students who have participated in PBTE programs in preference to those who have been trained in traditional programs it is an indicator of the success of the program.

Gradual follow-up is another feedback resource. Table 2 (Appendix) indicates that most of the programs are relatively new and have just begun to graduate students. Therefore, most directors, although they believe that ultimately such follow-up would be desirable, have engaged in little follow-up, and have not made plans to do so in future. One program director indicated that graduates of his program spread out geographically so that it would be impossible to track them.

The U of Wash engaged in graduate follow-up the first year of the program and plans to do so again, but inadequate funding and staff prevents this at present. The program at CSS, in existence for four years, does track its graduates informally. Attempts are made by faculty to interview and observe former students working locally. A questionnaire is filled out by the student and his public school supervisor. Students who work out of the area are sent the questionnaire as are their supervisors. A comparative analysis of performance-based and traditional programs will be undertaken this year at WWSC. The results of this investigation should be most useful in determining the merits of PBTE in this college.

The feedback systems in the programs have not been thoroughly planned nor implemented. The feedback processes are informal. A thorough system providing complete data in all areas mentioned in the early section would be useful for program adjustment, regeneration, and research. The utilization of a computer to store data about program and student performance would be useful, but expensive. The shortage of planning dollars and manpower makes the total cybernetic system barely adequate.

Figure 14. STUDENT ASSESSMENT FORM -- WWSC*

Name

Period of time - dates

		Not Demonstrated	Minimum Level	Advanced Level
Preparation	Objectives . . .			
	1. are justified as consistent with authority a synthesis of at least two authorities			
	2. specify observable behavior, or products (no range of teaching is assumed)			
	3. describe a range of learning outcomes, i.e. -- a. complex as well as simple four or more levels of cognitive domain b. affective as well as cognitive domains fourth level of affective domain c. divergent as well as convergent mode divergent mode is essential component			
	Strategies are Designed . . .			
	4. to elicit perceived purpose intrinsic as well as extrinsic			
	5. for appropriate practice under more than two kinds of conditions			
	6. to provide cues leading to correct responses more than two kinds of cues (resources)			
	7. for alternative tasks utilizing more than two modes of learning			
	8. to provide feedback at least twice during learning unit for all			
Interaction	Individualizes . . .			
	9. by preassessing pupil abilities preassess both competence and perceived purpose			
	10. by redesigning strategies after assessment including three sets of plans for different pupils			
	Interacts with Pupils to Elicit Specified Behavior, i.e. --			
	11. Elicit evidence that pupils accept or value task pupils change from accepting to valuing task			
	12. Elicit frequent, appropriate responses obtain comprehension-level responses from at least half of pupils within 30 minutes			

Figure 14. Continued

		Not Demonstrated	Minimum Level	Advanced Level
Interaction	13. Reinforces responses appropriately successful in at least three modes of reinforcement			
	14. Re-structures strategy during 30 minutes, teacher uses three or more strategies of interaction, with the result that additional pupils meet objectives			
Evaluation	Compares Pupil Responses with Objectives			
	15. Provides feedback to pupils several times, several ways during unit			
	16. Modifies own preparation as a result (no range of teaching performance is specific)			

Date _____ Recommendation _____

Clinical Professor _____ Supervising Teachers

_____

_____

*Herbert Hite, WWSC

Summary

Cybernation provides feedback about programs, materials, staff, and product through self- and other examination. Its goal is to seek congruence between program objectives and program output. Program feedback is often acquired informally through comments, observation, and reactions of participants. Some attitudinal measures are employed. Formal questionnaires about the appropriateness and efficacy of the instructional modules are distributed to the students. Modification of programs, strategies, and modules follows.

Student progress is determined through self-evaluation techniques, often built into the modules, other evaluations by peers, instructors, and field associates. This occurs through observation of performance in different settings, in different activities, and through paper-and-pencil devices.

Information about the program and the student is gained informally through the hiring procedures of the cooperating school systems, and the comments and observations of their personnel. There is very little follow-up. This system is not thoroughly planned and implemented and provides little hard or complete data. Until there is more funding for personnel and time for planning it will probably remain incomplete.

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Glossary

The reader will note that the terms defined here are also defined as they appear in the study.

Cluster: a group of related modules, sometimes called a component.

Competency-based teacher education programs: programs in which the competencies to be acquired by the student and the criteria to be applied in assessing the competency of the student are made explicit and the student is held accountable for meeting those criteria which include knowledge, performance, and product. In this study, this term is used interchangeably with "performance-based" teacher education programs.

Component: see "Cluster."

Criteria: the standards by which the student is assessed. There are three types;

> *Performance:* require the student to demonstrate required teaching behavior
>
> *Knowledge:* require the student to demonstrate required cognitive understandings
>
> *Product:* require the student to demonstrate through his teaching changes in the behavior of the pupil

Cybernation: adjustment based on feedback. In this study it includes assessment and evaluation feedback which enables adjustment of the systems of the suprasystem of the PBTE program.

Experience-based programs: programs which provide candidates with experiences but do not specify the knowledge or the performances necessary for exit.

Module: a set of learning activities intended to facilitate the student's acquisition and demonstration of a particular competency or objective.

Mediated Materials: instructional materials which require the use of audiovisual material such as filmstrips, slides, videotape recorders, etc.

Microteaching: a teaching situation which is scaled down in terms of time and number of students. It usually is a 4 to 20 minute iesson involving 3 to 10 students.

Multidimensional assessment systems: systems which attempt to assess performance in both cognitive and affective domains through observation of classroom behaviors.

Objectives: are goals, expectations to help design and evaluate purposes, strategies, and effectiveness. There are several kinds.

> *Behavioral:* describes in observable and measureable terms the expected output performance of the product of the system, the student. (Banathy)
>
> *Enabling:* can be behavioral or otherwise. They represent immediate learning demands which when integrated will achieve the terminal objectives. (Ammerman & Melching)
>
> *Expressive:* an objective which describes an event which a student is to experience.
>
> *Instructional:* a statement which specifies a competency a student is to acquire and demonstrate (Arends, Masla, Weber, p. 9.2).
>
> *Performance:* behavior expected to be exhibited at the completion or output by the product; a meaningful unit of performance relevant to the performance conditions and critical for instruction.
>
> *Terminal:* student performance objectives in which student action is stated at the level of a meaningful unit of performance. (Ammerman & Melching)

Performance-based teacher education programs: see competency-based teacher education programs.

Performance criteria: see criteria.

Process-product: attempts to relate observed teacher behaviors to pupil outcomes or performance.

Protocol materials: teaching materials which are used to aid the student to recognize and understand teaching concepts, i.e. "probing," "reinforcing."

Pupil: the child in the school.

Role playing: a small group technique for dramatizing, humanizing, and actively involving preservice or inservice teachers in real day-to-day problems of teaching.

Student: the person enrolled in the college preservice teacher education program.

System: a complex set of elements designed and built into an organized whole by virtue of the interdependence of its parts.

Systems approach: a self-correcting and logical methodology of decision making to be used for the design and development of man-made entities...includes formulation of performance objectives, the analyses of functions and components, the distribution of functions among the components, then scheduling, the training and testing of the system, installation, and quality control.

Suprasystem: a larger entity than a system designed for a specific purpose which is comprised of two or more systems (Banathy, p. 90).

Systems view: a way of thinking, by looking at man-made entities as systems, as assemblages of parts which are designed and built into an organized whole for the accomplishment of a specific purpose. (Banathy, p. 91).

Task analysis: process by which the designer of a system identifies the necessary knowledge and performance necessary to ensure suitable performance of the functions identified in the conceptualization of the teacher.

Training materials: teaching materials which are used to aid the student to reproduce or enact a sequence of activities or procedures required by a teaching concept.

Appendix

PERFORMANCE-BASED TEACHER EDUCATION PROGRAMS
A FACTUAL DESCRIPTION IN TABULAR FORM

Introduction to the Tables

The programs described in this report were selected through information obtained from members of the American Association of Colleges for Teacher Education (AACTE) and representatives of the United States Office of Education (USOE). They were identified as programs in operation before August, 1971. Initial on-site visits were made to campuses by members of the Performance-Based Teacher Education (PBTE) Committee of AACTE and/or representatives, including the writer. Some follow-up visits were made in the autumn, but the information used in this report refers to the period prior to August 1971 unless otherwise noted. For example, Weber State College began four field centers in the autumn of 1971. When first visited during academic year 1970-1971, these centers were not yet organized. Therefore, they were mentioned in the Table, but no mention was made of them in the body of the report.

A list of the programs, their directors, and their institutional affiliations is given on page 95. The abbreviations placed in parentheses next to the institutional name were used to denote the institution throughout the Tables.

The Tables summarize information gathered with the cooperation of the thirteen institutions covered by the study. If one follows each institution through the Tables, a factual description of each program during academic year 1970-1971 emerges.

A brief description of each Table is presented as an aid to the reader:

Table 1 -- General Information

The Table provides quantitative data pertaining to student and faculty participation in relation to the total number of students and faculty in the College, School, or Department of Education of the institution. The affiliation of the institution and its total student enrollment is also indicated.

Table 2 -- Performance-Based Teacher Education Programs

An overview of the scope, organization, and operation of the

programs is found in this Table. The level of the performance-based training programs is indicated, as well as whether the programs are total (the only preparation program offered), parallel (an alternative teacher preparation program), or pilot (small, experimental program). The length of time required for program development, the data of implementation, and the length of time expected to complete the program are indicated. Computerization, time organization within the program, modularization, and grading procedures are listed. The type of state certification is indicated.

Table 3 -- Modules

All PBTE programs studied had some type of instructional packages or learning units (modules) which were developed based on specified program objectives. Nomenclature and the number of modules varied from program to program. Objectives also varied. Some were narrow, others broad; some were stated in terms of teacher performance, others pupil outcome. This Table provides information about these aspects of the programs.

Table 4 -- Facilities

The facilities available to the PBTE programs had an effect on the type of activities which could be experienced and the kind of competencies developed. The Table provides information about the facilities available at the various institutions.

Table 5 -- Field Collaboration

All programs in this study included field experiences which required that students have frequent and varied contacts with schools. This Table indicates the field placement sites, the number of classroom teachers working with students, and the extent of inservice preparation available for the cooperating teachers. When appropriate, field centers are indicated, as are the affiliations of their directors.

Table 6 -- Personnel Utilization

The kind of relationship which existed among the college faculty, public school teachers, students, and any combination of the three is indicated in this Table. Often, groups of the above worked as a team -- two or more participants took joint responsibility for planning, implementing, and evaluating instruction. In other situations, there were indications of differentiated staffing -- different participants took responsibilities for activities requiring varying abilities, skills, and sophistication. Relationships between or among groups are indicated in the Table by arrows.

The Sample of Performance-Based Teacher Education Programs

1. ALABAMA, Livingston
   Livingston University (LU)
   College of Education
   Dr. Howard M. Fortney, Dean

2. FLORIDA, Tallahassee
   Florida Agricultural and Mechanical University (FAMU)
   School of Education
   "Individualized Teacher Education Program"
   Dr. Gertrude Simmons, Director

3. GEORGIA, Athens
   University of Georgia (U of Ga)
   College of Education
   "University of Georgia Early Childhood and Elementary Education Program"
   Dr. Gilbert F. Shearron, Chairman
   Dr. Charles F. Johnson

4. MINNESOTA, Duluth
   College of Saint Scholastica (CSS)
   Education Department
   "Project Criterion"
   Dr. Philip Richards, Chairman

5. MINNESOTA, Marshall
   Southwest Minnesota State College (SMSC)
   Division of Education
   Dr. Richard Wollin, Division Head

6. NEW YORK, Buffalo
   State University College at Buffalo (SUCB)
   Division of Education

   a) Undergraduate Urban Teacher Education (UUTEP)
      Dr. Richard Collier, Director

   b) Teacher Corps, Cycle V (TC)
      Dr. John Masla, Director

7. NEW YORK, New York
   Teachers College, Columbia University (TCCU)
   Department of Curriculum and Teaching, Preservice Program
   Dr. Bruce Joyce, Director
   Mrs. Rhoada Wald, Associate Director
   Mrs. Marsha Weil, Associate Director

8. TEXAS, El Paso
   University of Texas -- El Paso (UTEP)
   TTT Program field test -- Teacher Corps, Cycle VI
   Dr. John D. McFarland, Director
   Dr. Norma Hernandez, Associate Director of TTT
   Dr. Oscar Jarvis, Deputy Director
   Dr. Tomas Arciniega, Director, Teacher Corps

9. UTAH, Provo
   Brigham Young University (BYU)
   College of Education
   "Individualized Secondary Teacher Education Program" -- I Step
   Dr. Hugh Baird, Director

10. UTAH, Salt Lake City
    University of Utah (UU)
    Graduate School of Education
    "Life Internship Program" -- LIP
    Dr. Asahel Woodruff, Director
    Dr. Philip Kapfer, Assistant Director

11. UTAH, Ogden
    Weber State College (WSC)
    School of Education
    "Individualized Performance-Based Teacher Education Project" -- IPT
    Dr. Blaine Parkinson, Director

12. WASHINGTON, Bellingham
    Western Washington State College (WWSC)
    Department of Education
    "Southeast Seattle Project"
    Dr. Herbert Hite, Chairman

13. WASHINGTON, Seattle
    University of Washington (U of Wash)
    College of Education
    Dr. Clifford Foster, Director

    a) STEP Program

    b) Renton -- University of Washington Program

Table 1. GENERAL INFORMATION[1]

		Student Enrollment			Faculty	
Institutions	Affiliation	Institution	College, School or Department of Education	Program	College, School or Department of Education	Program
1. LU	State	1,600 graduate & undergraduate	829 including 300 grad. students	150	27	27
2. FAMU	State	4,500	749 undergraduates 330 graduates	8 '70-71 11 '71-72	65	6 1 From: Art, Education, English, Math, Music, Physical Education
3. U of Ga	State	19,000	1,200 elementary education undergraduates	450-500[2]	330 full-time	40-50
4. CSS	Private	925	350	350	10 full-time equivalent	10
5. SMSC	State	3,200	450	450	11 '70-71 14 '71-72	all education faculty
6. SUCB a) UUTEP b) TC	State	8,000 undergraduates 2,000 graduates	1,231 teachers prepared 1970-71	 40 37	76	 9 12
7. TCCU	Private	*	Teachers College 2,158 full-time students *	32 pre-service elem. ed. 20 special ed.	Teachers College 227 full-time faculty *	3 fulltime faculty 4 graduate students
8. UTEP	State **	12,500	230[3]	28 Teacher Corps 40 TTT (Fall, 1972)	65	5 Teacher Corps 15 TTT (Fall, 72)

[1]All Figures are approximate and relate to the 1970-1971 program unless otherwise noted.

[2]Program is being implemented as the traditional program is phased out, therefore students are in some phase of the program.

[3]*The College Blue Book*, 1969-70, 13th ed, vol. 2. New York: CCM Information Corp.

*This is a graduate school which provides advanced training in education. The program described is the only preservice elementary education program in the college.

**Teacher Corps is field testing TTT program which is expected to be operational Fall, 1972.

Table 1. Continued

Institutions	Affiliation	Student Enrollment			Faculty	
		Institution	College, School or Department of Education	Program	College, School or Department of Education	Program
9. BYU	Private	26,000	1,600 in student teaching	113	82 college 13 secondary ed. dept.	4-5
10. UU	State	23,000	2,300[4]	12 6 2quarters 6 2quarters	150 25 Dept. Ed.	2 full-time + grad. assistants
11. WSC	State	8,500	600 Teacher Education	600	15	15
12. WWSC	State	9,500	1,100 seniors graduated	110 36 enter each quarter	61 full-time	3 clinical professors 2 college 1 school district
13. U of Wash	State	32,000[5]	4,360 undergrad. 832 grad.		74 voting members 40 non-voting members	7 clinical professors
a) STEP				51 elem. 25 secondary		
b) Renton				30 elem. 17 secondary		

[4]Ibid.

[5]Ibid.

Table 2. PERFORMANCE-BASED TEACHER EDUCATION PROGRAMS

Institutions	Level: Elementary (E) Junior H.S. (J) Secondary (S)	Type*: Parallel (//) Total (T) Pilot (P)	State Certification	Pre-Operational Period	Initiation	Duration	Computerization	Organization of Instruction: Modularization	Organization of Instruction: Time Block	Grading
1. LU	E, S,	T	approved program	1967-1970 (3 yr.)	Summer 1970	4 yr. as of Sept. 1971	as of Sept. '71	yes within course credit structure	yes	Demonstrate Competence (A)
2. FAMU	S	P	special approved program (3 yr.)	1969 1 yr.	Fall 1970	6 quarters 2 year professional component	no	yes within course credit structure	no	Satisfactory Unsatisfactory (S-U)
3. U of Ga	E	moving to P-B 35% P-B	approved program	1969-1970 (3 yr.) USOE Model	Fall 1970	2 1/2 years	no	partial within course credit structure		Student teaching (S-U) Other courses A, B, C
4. CSS	E, S,	T	approved program	Spring, 1967 7 months	Fall 1967	Elem. 4 year Second. 2 1/3 yr. (jr. yr.)	no	yes within course credit structure	yes	A, B, C by contract
5. SMSC	E, S,	T rural	approved program	1967-1969	Fall 1969	2 year professional component	in planning stage	yes 5 blocks over 2 yrs. student teaching	yes	(S-U) Honors Negotiated

*Total indicates that this is the only teacher preparation program offered on this level; Parallel - the program is one of alternative programs offered; Pilot indicates that the program is a small, experimental one.

Table 2. Continued

Institutions	Level: Elementary (E) Junior H.S. (J) Secondary (S)	Type*: Parallel (//) Total (T) Pilot (P)	State Certification	Pre-Operational Period	Initiation	Duration	Computerization	Organization of Instruction: Modularization	Organization of Instruction: Time Block	Grading
6. SUCB	E	// full time	course credit	1 1/2 years	Fall 1970	2 year professional component	no	partially within course structure		A, B, F, plan change to P-F
a) UUTEP	urban	on site				Jr. yr.				
b) TC	urban	//	course credit	developed as prog. became operational	July 1970	2 year professional component	no	see above		Some P-F A, B, C, negotiable
	E pre-service grad.									
7. TCCU	E pre-service grad.	T experimental	approved program	1968 USOE model	Fall 1969	3 semesters 1 year	no planned for '71-72	partially		P-F
8. UTEP	urban E Mexican-American	P Teacher Corps field test	approved program	1970	Summer 1971	2 year	no	yes 8 Blocks professional component course credit structure	yes	A or Incomplete
9. BYU	S	//	approved program	Fall '66 4 semest. pilot period	1968	1 year jr., senior, grad. professional component	yes	yes	yes	A, B, C, or P-F negotiable

*Total indicates that this is the only teacher preparation program offered on this level; Parallel - the program is one of alternative programs offered; Pilot indicates that the program is a small, experimental one.

Table 2. Continued

Institutions	Level: Elementary (E) Junior H.S. (J) Secondary (S)	Type*: Parallel (//) Total (T) Pilot (P)	State Certification	Pre-Operational Period	Initiation	Duration	Computerization	Organization of Instruction: Modularization	Organization of Instruction: Time Block	Grading
10. UU	E, J, S	P	special arrangement w/ state	1 year on-going developmental	Fall 1969	2 quarters senior yr.	no	not appropriate Internship in schools		A, B, C,
11. WSC	E, S	T	approved program	1 quarter Field test of materials	Fall 1970	2 years Jr. year	no	yes course-block of several Wilkits	yes	Credit-No credit
12. WWSC	E, S	//	approved program temporary cert. for student teaching	1967	gradual devel. - pilot progms.	2 quarters entry soph. yr. or higher	no	yes within course credit structure	yes	P-F
13. U of Wash					1967	elementary 3 quarters	no	no	yes	P-F
a) STEP	E, S	//	see WWSC	3 year	'70-71 more student	secondary 2 quarters				
b) Renton	E, S	//	see WWSC	1 year	Fall 1968	2 year	no	yes	yes	P-F

*Total indicates that this is the only teacher preparation program offered on this level; Parallel - the program is one of alternative programs offered; Pilot indicates that the program is a small, experimental one.

Table 3. MODULES

Institutions	Institutional Name	Number Available	Objectives
1. LU	*IPIM* Indiv. Prescribed Instructional Module	200	teacher performance/hoping to reach pupil outcome narrow
2. FAMU	*Module*	15 FAMU + 45 state of Fla. modules	enabling - narrow terminal - broad teacher performance
3. U of Ga	*PM* Proficiency Module Cluster	50	teacher performance terminal behavioral range from intermediate to broad
4. CSS	*IP* Instructional Project	110 Elementary -- 60 Secondary	intermediate/teacher performance
5. SMSC	*ComPac* Competency Package	150+	enabling - narrow plan to cluster into broader objectives
6. SUCB	*Module* *Cluster*	continually being developed - many	teacher performance/broad
7. TCCU	*Module* *Component*	15-20	intermediate teacher performance broad
8. UTEP	*IM* Instructional Module	few - being developed	teacher performance/broad
9. BYU	*Objectives Unit*	110 objectives 8 units	teacher performance 110 specific objectives - narrow
10. UU	*Teaching Tasks + Unit*	--	specific teacher competencies plus pupil behaviors and attitudes in class of student teacher
11. WSC	*Wilkit* Weber Individ. Learning Kit	25 Secondary 45 Elementary	intermediate/teacher performance
12. WWSC	*Package*	40	broad/pupil outcome
13. U of Wash	*Learning Package*	continually being developed	narrow/pupil outcome

Table 4. FACILITIES

Institutions	Facilities	
1. LU	Media lab. Instructional materials center	Public schools Computer facility
2. FAMU	Curriculum lab. Learning center (instr. materials) Closed circuit TV	Campus school Public high school
3. U of Ga	New building, May, 1971 Media center Cables available for Dial Access installation when funds available	Open access labs for math and science Public schools
4. CSS	Simulabs (2 model classrooms) Instructional materials center - video, av	Seminar rooms Public and private schools
5. SMSC	Educational learning centers Media lab Video equipment	Dial Access installation between dorms and library Public schools New building being erected
6. SUCB	On-site microteaching and simulation materials On-site VTR's and audio recording equipment On-site instructional resource center	TV lab on campus Public schools
7. TCCU	Public schools Campus school TV studio VTR and audio equipment	Minicourse and training materials Resources of Teachers College Microteaching
8. UTEP	New building, 1970 Demonstration center - 2 clrms. AV center Instructional materials center	Curriculum library Teaching stations Research center Public schools
9. BYU	Building on edge of campus housing: Instructional materials center Microteaching studio Classrooms, study and office space	Media lab Dialex to library
10. UU	Public schools and their equipment	AV equipment from college
11. WSC	New building being erected - presently use library basement Instructional media center AV equipment	Video Dial Access to library Public schools Operations Center Human Relations Training Room
12. WWSC	Public schools & college share equipment: Materials resource center AV materials, hard and software	Microteaching facility
13. U of Wash	Materials center at clinical facility - available all the time Open-concept room, movable furniture, flexible partitioning Public schools and university share equipment & materials	

Table 5. FIELD COLLABORATION

	Field Collaboration				
Institutions	Districts, Schools, Level	Classroom Teachers	Related Inservice Program	Field Centers (FC)	FC Director's Affiliation
1. LU	4 elementary - Boligee, York, Sumter Co, Marengo Co 1 secondary - Meridian, Miss.	40	no	---	--
2. FAMU	Tallahassee, Richards H.S. FAMU Campus School	varies	no	---	--
3. U of Ga	3 districts - Clarke Co - 10 schools Oglethorpe Co - 1 school Oconee Co - 2 schools	220	basic orientation informal	13	college faculty
4. CSS	Innovative schools in Minnesota and surrounding states	varies	yes	---	--
5. SMSC	5 districts - Montivedeo, Canby, Pipestone, Marshall, Granite Falls	varies	formal summer program informal year round	5	joint appointment & salary
6. SUCB					
a) UUTEP	Lackawanna - 5 schools	18	yes	1	college faculty
b) TC	Buffalo - 7 schools	50	yes team leaders	1	college faculty
7. TCCU	TC campus school New York City public & private schools	40	no	---	--

Table 5. Continued

Institutions	Field Collaboration				
	Districts, Schools, Level	Classroom Teachers	Related Inservice Program	Field Centers (FC)	FC Director's Affiliation
8. UTEP	El Paso Ysleta (anticipated)	4 team leaders 8 teachers	yes	1	college faculty & district coordinator
9. BYU	Jordan, Alpine, Provo, Nebo	30-40	no	---	--
10. UU	Salt Lake City 3 high schools 2 jr. high schools Granite District 1 elementary school	12	yes	---	--
11. WSC	Ogden & Weber Co	150	Summer 1971 with follow-up	4-Fall 1971	clinical teachers from district staff
12. WWSC	Southeast Center Seattle 6 schools	45	yes	1	college faculty
13. U of Wash			yes		program coordinator college faculty
a) STEP	Seattle 10 elementary 1 jr. high school 1 high school	31 secondary		1	2 field coordinators school personnel
	Shoreline 5 elementary 1 high school			1	1 field coordinator school personnel

Table 5. Continued

Institutions	Districts, Schools, Level	Field Collaboration: Classroom Teachers	Related Inservice Program	Field Centers (FC)	FC Director's Affiliation
	Northshore 5 elementary 1 jr. high school	51 elementary		1	1 field coordinator school personnel
b) Renton	Renton	50-75 1:1 ratio with students	yes	1	1 field coordinator college faculty

Table 6. PERSONNEL UTILIZATION

Institutions	Personnel Utilization*		
	College Faculty	Public School Teachers	College Students
1. LU	team	← differentiated →	
2. FAMU	team	← differentiated →	
3. U of Ga	team	---	differentiated
4. CSS	← differentiated →		
5. SMSC	team		
6. SUCB a) UUTEP b) TC	--	---	differentiated
7. TCCU	team		team
		← team →	
8. UTEP	← team →		
		← team →	
9. BYU	← team →		team
10. UU	team	← team →	
11. WSC	team	team & individual	team & individual
12. WWSC	--	---	team
13. U of Wash a) STEP	team		
b) Renton	team	← differentiated →	

*Arrows indicate relationships between groups.

THE TEXAS TEACHER CENTER PROJECT

The AACTE Committee on Performance-Based Teacher Education serves as the national component of the Texas Teacher Center Project. This Project was initiated in July, 1970, through a grant to the Texas Education Agency from the Bureau of Educational Personnel Development, USOE. The Project was initially funded under the Trainers of Teacher Trainers (TTT) Program and the national component was subcontracted by the Texas Education Agency to AACTE.

One of the original thrusts of the Texas Teacher Center Project was to conceptualize and field test performance-based teacher education programs in pilot situations and contribute to a statewide effort to move teacher certification to a performance base. By the inclusion of the national component in the Project, the Texas Project made it possible for all efforts in the nation related to performance-based teacher education to gain national visibility. More important, it gave to the nation a central forum where continuous study and further clarification of the performance-based movement might take place.

While the Texas Teacher Center Project is of particular interest to AACTE's Performance-Based Teacher Education Committee, the services of the Committee are available, within its resources, to all states, colleges and universities, and groups concerned with the improvement of preparation programs for school personnel.

ABOUT AACTE

The American Association of Colleges for Teacher Education is an organization of more than 860 colleges and universities joined together in a common interest: more effective ways of preparing educational personnel for our changing society. It is national in scope, institutional in structure, and voluntary. It has served teacher education for 55 years in professional tasks which no single institution, agency, organization, or enterprise can accomplish alone.

AACTE's members are located in every state of the nation and in Puerto Rico, Guam, and the Virgin Islands. Collectively, they prepare more than 90 percent of the teaching force that enters American schools each year.

The Association maintains its headquarters in the National Center for Higher Education, in Washington, D. C.--the nation's capital, which also in recent years has become an educational capital. This location enables AACTE to work closely with many professional organizations and government agencies concerned with teachers and their preparation.

In AACTE headquarters, a stable professional staff is in continuous interaction with other educators and with officials who influence education, both in immediate actions and future thrusts. Educators have come to rely upon the AACTE headquarters office for information, ideas, and other assistance and, in turn, to share their aspirations and needs. Such interaction alerts the staff and officers to current and emerging needs of society and of education and makes AACTE the center for teacher education. The professional staff is regularly out in the field--nationally and internationally--serving educators and keeping abreast of the "real world." The headquarters office staff implements the Association's objectives and programs, keeping them vital and valid.

Through conferences, study committees, commissions, task forces, publications, and projects, AACTE conducts a program relevant to the current needs of those concerned with better preparation programs for educational personnel. Major programmatic thrusts are carried out by commissions on international education, multicultural education, and accreditation standards. Other activities include government relations and a consultative service in teacher education.

A number of activities are carried on collaboratively. These include major fiscal support for and selection of higher education representatives on the National Council for Accreditation of Teacher Education--an activity sanctioned by the National Commission on Accrediting and a joint enterprise of higher education institutions represented by AACTE, organizations of school board members, classroom teachers, state certification officers, and others.

The Association headquarters provides several secretariat services which help make teacher education more interdisciplinary and comprehensive; the Associated Organizations of Teacher Education, International Council on Education for Teaching, Society of Professors of Education, and The John Dewey Society. A major interest in teacher education provides a common bond between AACTE and fraternal organizations.

AACTE is deeply concerned with and involved in the major education issues of the day. Combining the considerable resources inherent in the consortium--constituted through a national voluntary association--with strengths of others creates a synergism of exceptional productivity and potentiality. Serving as the nerve center and spokesman for major efforts to improve education personnel, the Association brings to its task credibility, built-in cooperation and communications, contributions in cash and kind, and diverse staff and membership capabilities.

AACTE provides a capability for energetically, imaginatively, and effectively moving the nation forward through better prepared educational personnel. From its administration of the pioneering educational television program, "Continental Classroom," to its involvement of 20,000 practitioners, researchers, and decision makers in developing the current *Recommended Standards for Teacher Education*, to many other activities, AACTE has demonstrated its organizational and consortium qualification and experiences in conceptualizing, studying and experimenting, communicating, and implementing diverse thrusts for carrying out socially and educationally significant activities. With the past as prologue, AACTE is proud of its history and confident of its future among the "movers and doers" seeking continuous renewal of national aspirations and accomplishments through education.

PROPOSED FUTURE PUBLICATIONS IN THE PBTE SERIES

Alternative curricular designs for performance-based teacher education programs by Bruce Joyce, Teachers College, Columbia University.

The implications of broadening the base for decision making in teacher education by Michael Kirst, Stanford University.

A look at the humanistic elements in performance-based teacher educations programs by Paul Nash, Boston University.

Management of performance-based teacher education programs by Charles Johnson, University of Georgia.

Problems in assessing teaching performance by Fred McDonald, Educational Testing Service.

Performance-Based Teacher Education: Some Measurement and Decision Making Considerations by Jack Merwin, University of Minnesota, Minneapolis.

Performance-Based Teacher Education and the Subject Matter Fields by Michael F. Shugrue, Modern Language Association.

A scenario of how performance-based teacher education programs might look in the future by Asahel Woodruff, University of Utah.

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